

Feasibility Study

for the

Ithaca-Tompkins Regional Airport Industrial/Business Park



Prepared for:

Tompkins County
125 East Court Street
Ithaca, NY 14850

August 2016



Clark Patterson Lee
DESIGN PROFESSIONALS

TABLE OF CONTENTS

I.	GENERAL.....	1
II.	MARKET ANALYSIS.....	1
III.	PROJECT AREA.....	2
IV.	EXISTING INFRASTRUCTURE.....	4
V.	ALTERNATIVE ENERGY.....	6
VI.	DEVELOPMENT ALTERNATIVES.....	9
VII.	PROJECT COSTS.....	13
VIII.	CONCLUSION AND NEXT STEPS.....	16

LIST OF FIGURES

Figure 1	Overall Parcel Ownership Map
Figure 2	Existing Constraints Map
Figure 3	Existing Utility Map
Figure 4	Phase 1: NYSDOT & Shovel Ready Enablement Concept Plan
Figure 5	Conceptual Site Plan

LIST OF APPENDICES

Appendix A	Market Analysis & Feasibility Study: Airport Business Park
Appendix B	Cost Estimates
Appendix C	Photograph Log
Appendix D	Environmental Mapping
Appendix E	Utility Record Mapping
Appendix F	Warren Road Sewer District Map
Appendix G	Additional Conceptual Site Plans

I. General

Tompkins County is preparing a master plan and economic development strategy for a new industrial/business park (Park), located at the northwestern corner of the intersection of Warren Road and Cherry Road in the Town of Lansing, New York, just north of the City of Ithaca. This project will provide an opportunity to create a new business park that will utilize locational advantages, provide additional markets for Tompkins County, create new jobs, and add to the local tax base.

This report summarizes the findings of the feasibility study completed for the Park. The feasibility study includes a market analysis and financial feasibility review, and an analysis of the various opportunities and site constraints including environmental restrictions, utilities, and zoning. The development of conceptual plans and cost estimates were also completed for this study.

II. Market Analysis

A. Executive Summary

Camoin Associates conducted a market analysis, which examined economic and real estate trends in the Tompkins County market area to identify opportunities and constraints for commercial and light industrial development at the Park. The market analysis involved a review of prior reports and existing materials, analysis of economic trends (past and projected), real estate market research, and phone interviews with regional industry and market experts (brokers, developers, investors, lenders, etc.) to obtain further data on the real estate market and overall economic trends.

The Tompkins County market area is small, but healthy, with low vacancy rates and a relatively diverse product compared to many similarly sized communities. Over the past 10-years, the region has experienced slow, consistent growth both in terms of the real estate environment and the economy as a whole. Looking forward, this slow-and-steady growth pattern is expected to continue with just over 200,000 SF of additional office space projected to be needed by 2025. With proposals for well over 500,000 SF of new space to enter the local market, projects currently in the pipeline will easily meet the projected demand in the coming years.

The Park's location next to the Cornell Technology Park is a competitive advantage over other locations as this is the most desirable location in the region for many businesses. However, the Cornell Technology Park still has development pads available and would likely be the first choice for most prospects. To be successful, the airport property will need to differentiate from other properties already on the market or in the development pipeline such as strategic innovative accommodations to attract a younger, tech-based workforce and incorporating sustainable design features and energy sources.

The complete marketing analysis for the proposed Park in Tompkins County is included in Appendix A. Cost estimates developed for the project are included in Appendix B and are discussed in Section VI of this study.

III. Project Area

A. Town of Lansing

The total potential project area consists of 3 individual parcels and approximately 53 acres, with a potential 30 acre expansion to the west, as shown in Figure 1 of this report. Conceptual layouts were reviewed as part of this study and are discussed in the following sections of this report. A photograph log of the site is included in Appendix C.

B. Property Owners and Stakeholders

Tompkins County owns the three (3) parcels that make up the proposed Park. The following is a summary of the parcels included in this study:

Owner	Tax Account #	Total Acreage	Developable Acreage
Tompkins County	44.0-1-47	12.50	10.71
Tompkins County	44.0-1-20.1	40.13	38.48
Tompkins County	44.0-1-22.1	30.00	21.03
TOTALS:		82.63	70.22

The developable acreage listed factors in any wetlands, streams and buffers on the site and removes this area from the total acreage available.

C. Environmental Resources Present

There is one unnamed tributary located within the Park and one wetland located within the potential park expansion area, as shown in Figure 2. However, there are no foreseen environmental conditions that would unduly impede the project or that would prevent the construction of a new business park. Permitting may be required for any stream impacts proposed by the project. In addition, the site is not located within an existing Agricultural District as shown in the Agricultural District Map included in Appendix D. All environmental mapping reviewed as part of this analysis is included in Appendix D.

The soils for the project site were also reviewed and the soils map and summaries are included in Appendix D. The primary soils on the site include Erie Channery Site Loam (EbB), the Lanford Channery Silt Loam (LaB), the Bath and Valois Soils (BgC), and the Erie-Chippewa Channery Silt Loam (ErA). According to the USDA Natural Resources Conservation Service Web Soil Survey, the BgC soils are well drained, while the EdB and ErA soils are somewhat poorly drained. The clay content of these soils range from 12 to 22 percent and the hydrologic soil group rating is C and D. The design of drainage features at the site will be important for the overall development. While infiltration may

be possible in areas of the site, it is likely that underdrains and detention/retention ponds will be required. In addition, geogrid material may be required for roadways to minimize movement due to frost heave and prevent roadway cracking.

D. Zoning

Two of the three development parcels located within the potential project area are zoned as Industrial/Research (IR) property according to the Town of Lansing zoning code, while the other parcel is zoned Residential – Medium Density (R2). A summary of zoning for the parcels is as follows:

Owner	Tax Account #	Total Acreage	Zoning
Tompkins County	44.0-1-47	12.50	IR
Tompkins County	44.0-1-20.1	40.13	IR
Tompkins County	44.0-1-22.1	30.00	R2

A summary of some of the zoning requirements for the Industrial/Research district is listed in the following table.

Zone	Min. Lot Size (Acres)	Req. Open Space	Max Height (feet)
Industrial/Research	None	Minimum of 20%	35

The Industrial/Research district appears to be flexible in the type of use and site limitations. Each new tenant will be required to submit plans to the Town of Lansing for a site plan review. It does not appear that any of the property identified for the initial project will require rezoning; however, the potential expansion to the west of the park will require rezoning, as it is currently zoned Residential – Medium Density (R2).

Federal Aviation Administration (FAA) regulations and requirements will apply to the development site. According to preliminary findings and the FAA online Notice Criteria Tool, this project would not exceed an instrument approach area regulation and the proposed structures and roadways would be acceptable. FAA review would be required to confirm these findings. In addition, the proposed development is close enough to the airport that it could impact the assurance of navigation signal reception. For these reasons, FAA review would be required. A conceptual site plan was submitted to the FAA for review during this feasibility study. The FAA has requested that all structure plans be submitted to them for review during the design process.

In addition, the airport runway clear zone extends onto the Tompkins County property as shown in the conceptual plans developed for this feasibility study. No buildings or structures may be constructed within this zone. Therefore, the southeastern corner of the property between Warren Road and Cherry Road will be will not be considered in the developable acreage for the business park. However, recent discussions with the

Department of Motor Vehicles (DMV) has indicated that the southeastern corner would be an ideal location to construct a vehicle testing area. As a result, this area has been shown on the concept plans developed for this study.

IV. Existing Infrastructure

A. Water

Existing water mains in the project vicinity are shown in Figure 3 of this report. There is an existing 16-inch water main located along Warren Road and 12-inch water main located along Cherry Road. The static pressure along Warren Road, near the proposed main entrance to the Park is approximately 50 pounds per square inch (psi). The water mains are primarily located within the road right-of-ways or easements.

The Town of Lansing owns and operates the water system in the project area, including a 1.0 million gallon water storage tank on Village Circle just north of the proposed project. The Town of Lansing has a direct connection to the Southern Cayuga Lake Intermunicipal Water Commission (Bolton Point) system at the Burdick Hill Pump Station. The Bolton Point water treatment facility currently produces approximately 4.23 million gallons per day (MGD), which is below the permitted capacity of 6.0 MGD.

Based on conversations with the Town of Lansing and Town Engineer, it appears that the current system without any modifications can accommodate 30,000 gallons per day. Any demand above 30,000 gallons per day will need to be reviewed by the Town in detail. To date, Bolton Point has not performed any fire flow testing of the system in the area of the proposed project. Fire flow testing and water modeling may be required to determine if any offsite improvements would be required. Record mapping of the water system is included in Appendix E.

B. Sanitary Sewer

Existing sanitary sewer mains in the project vicinity are shown in Figure 3. There is an existing 8-inch sanitary sewer main located along Warren and Cherry Road. The proposed project is located within the Warren Road sewer district. The collection system eventually discharges to the Village of Cayuga Heights Wastewater Treatment Facility (WWTF), located along East Shore Drive in Ithaca.

The Village of Cayuga Heights Wastewater Treatment Facility is currently permitted to discharge 2.0 MGD, but is currently operating at 1.477 MGD. There are limitations on expansion of the WWTF because of the limited space available for expansion.

Based on conversations with the Town of Lansing and Town Engineer, it appears that the current system without any modifications can accommodate 30,000 gallons per day. However, the entire development area is not located within the Warren Road Sewer District. Parcel 44.0-1-47 is currently within the Warren Road Sewer district while Parcel

44.0-1-20.1 and Parcel 44.0-1-22.1 are not located within the Warren Road Sewer District. The boundaries of the existing Warren Road Sewer District are shown in Appendix F. Since the Park's building development is not expected to be located on Parcel 44.0-1-47, the remaining two parcels will need to be added to the Warren Road Sewer District in order to allow a useful sanitary sewer connection. There is a process to amend the Warren Road Sewer District to include the entire development area. This process will include negotiations between Tompkins County, The Village of Lansing, the Village of Cayuga Heights and the Town of Lansing.

It is not anticipated that any offsite improvements to the collection system or WWTF will be required for this project. Record mapping of the sewer system is included in Appendix E.

C. Natural Gas

Currently, there are New York State Electric and Gas (NYSEG) gas mains located along Warren Road and Cherry Road. The County is currently conducting studies to determine the existing capacity of natural gas in critical economic development areas, with the project area identified as an area of constrained natural gas supply. Potential alternative energy options have been explored as part of this study and are discussed in Section V of this report. Specific capacity will need to be determined during design development for potential tenants. Record mapping is included in Appendix E.

Other heating options include ground or air source heat pumps, heating oil and propane. The fossil fuel options would be a hurdle for businesses looking for shovel ready solutions and the "green" image goal of this business park.

D. Electric

There are power lines according to record mapping provided by NYSEG, along Warren Road and Cherry Road as shown in Figure 3. Electrical availability cannot be determined at this time; however the County and NYSEG are in the process of evaluating the capacity and condition of their infrastructure. Specific capacity will need to be determined during design development for potential tenants.

E. Transportation

Current access to the Park would be proposed along Warren Road. A secondary access road may be possible along Cherry Road and would require approval from the Town of Lansing. Additional park connections could include Triphammer Road in the future and will be dependent on Town approval and overall development plans. Access to NYS Route 13 and NYS Route 34 is approximately 2 miles from the Park. The NYS Thruway is approximately 40 miles to the north of the Park. A traffic study would be required to analyze the impacts of a new roadway and increased traffic in the area, and to determine if any mitigation would be required.

The Tompkins Consolidated Area Transit, Inc. (TCAT) provides public transportation for the Ithaca area. The TCAT system has many bus routes throughout many of the major centers in Tompkins County. One of these bus routes includes Warren Road along the proposed project. This would provide public transportation and access to a larger workforce for any potential businesses. Two bus stops along Warren Road have been included in the conceptual plan for the proposed park, including a crosswalk for pedestrian access across Warren Road.

V. Alternative Energy

A. Summary

Alternative energy concepts will be considered for the Park development. The installed costs, funding opportunities, and cost savings will be evaluated for each system. The New York State Energy Research and Development Authority (NYSERDA) provides various funding opportunities to encourage the construction of renewable energy systems in an effort to reduce the demand on the local grid infrastructure. NYSERDA also offers energy efficiency programs to incentivize efficient building and system designs. Below is a summary of both on-site energy production systems and renewable system technologies.

Considerations that may affect funding opportunities include the ownership of the site (private vs. municipal), one land parcel vs. multiple parcels, and utilities metering (separate building meters owned by multiple tenants vs. a single meter with one owner). The implications of these factors will be reviewed in further detail as the project development continues to evolve.

B. Photovoltaic (PV) System

NYSERDA offers performance-based incentives for the installation of new grid-connected solar photovoltaic (PV) systems greater than 200 kW that offset the use of grid-supplied electricity. PV systems must be sized primarily to serve project load. Incentives will be allocated on a first-come, first-served basis and Incentive Applications will be accepted on a rolling basis through December 31, 2023, or until funds are fully committed, whichever comes first.

The Program establishes incentives based on a Megawatt (MW) Block design that allocates MW targets to specific regions of the State; breaks those MW targets into blocks to which incentives are assigned; awards incentives to applications based on the block in effect at the time of Incentive Application submission; and then moves to the next block, which has a decreased incentive, when a MW Block is fully subscribed. Once all of the blocks within a region are fully subscribed, an incentive is no longer offered in that region. This program will likely have sufficient funding capability for the next few years, but the specific incentive block available at the time of application cannot be determined.

The NY-Sun Commercial/Industrial Program provides incentives based upon the performance of the PV System as a function of annual energy production. In addition to performance-based incentives, the program includes additional incentives for project installations in utility-identified strategic locations as well as projects that integrate energy storage or comprehensive energy efficiency.

Participating Contractors are responsible for preparing and submitting all required PV Incentive Application documentation to NYSERDA. Incentives are paid directly to the Participating Contractor that submits the Incentive Application. The Participating Contractor is required to disclose the full amount of the NYSERDA incentive to the end-use customer. The tax-exempt status of the County may affect the incentive amount for a directly-owned system.

A second financial option for an on-site PV system is a Power Purchase Agreement (PPA) in which the contractor/holding company maintains ownership of the system for the duration of the PPA contract. A typical contract duration is 15-20 years. The County receives a reduced electric rate for the quantity of electricity generated. At the end of the contract term, the County may extend the agreement, purchase the system at the market rate, or the contractor will remove the system. There is no upfront cost to the Owner to install the system. A PV system could either be ground-mounted or roof-mounted.

C. On-Site Wind Turbines

The NYSERDA on-site wind turbine program expired on February 29, 2016, and it is not known at this time if the program will be extended in the future. Based on the site location, and the predicted wind energy potential, this site has rating of “Very Poor”, which would preclude any funding opportunities through a future program offering. Proximity to the airport runway would also likely rule out wind energy at this location.

D. Combined (Cooling,) Heating, and Power – C(C)HP System

NYSERDA will provide financial incentives for the installation of pre-qualified, pre-engineered CHP systems by approved CHP system vendors at customer sites that pay the SBC surcharge on their electric bill provided that the CHP system will be fueled by natural gas that is subject to the SBC surcharge on the gas bill. Incentive funds will be allocated on a site-by-site, first-come-first-served basis in the order of application receipt until December 30, 2016 or until all funds are committed, whichever comes first. The maximum CHP system size is 1.3MW. NYSERDA will only contract with approved CHP system vendors, and all incentives will be paid to approved CHP system vendors.

NYSERDA has developed a set of conservative CHP system sizing guidelines for common building types based on combinations of site characteristics and CHP system sizes that have been shown to perform well. Applications that fall within the sizing guidelines require significantly less engineering analysis and will receive a streamlined review by NYSERDA.

A CHP system may consist of more than one prime mover/generator units, and may also include an absorption chiller. In general, only one CHP system can be installed per site. The generator(s) provide an on-site power source, with a parallel connection to the electric utility service, and can also be configured as a stand-by power source during a utility outage. The generator exhaust heat is captured to provide heating potential for HVAC system use. The addition of an absorption chiller allows the generator waste heat to be used for both heating and cooling potential, known as a CCHP system.

NYSERDA PON 2568 offers incentives based on pre-qualified systems and vendors. This system will likely not yield a simple payback within the operational life expectancy of the equipment. The best application for a CHP or CCHP system is for a larger facility with extended hours of operation and a fairly continuous thermal load. Current questions regarding natural gas availability are also likely to limit the feasibility of CHP at this location.

E. Geothermal (Ground-Source) Heat Pump System

Geothermal (Ground-Source) technology is viable alternative when coupled with a heat pump HVAC system. A common well field could serve all buildings with an underground network of piping or individual systems could be developed for each building. A concept level size of the well field is 350'x350', with each well approximately 400' deep. The well field can be installed under site features such as sidewalks and parking lots. In order to evaluate the viability of a geothermal system, drilling a test well is required to determine the thermal conductivity of the geologic conditions.

Heat pump HVAC systems solely utilize electric energy for both heating and cooling, so a geothermal heat pump system incorporated with an on-site power production system will offer added benefits by minimizing the electric utility costs and providing a consistent load.

NYSERDA does not offer incentives for geothermal systems, and the cost of construction for the well field in conjunction with the heat pump system is more than other HVAC system types. Air source heat pumps will also be considered for HVAC system design even if geothermal technology is not pursued.

F. Biomass Boiler System

The use of a central Biomass Boiler System(s) for the Business Park may not be a practical alternative due to the heating capacity requirement and the multiple buildings layout, but individual biomass boiler systems for distinct buildings may be feasible depending on the operational characteristics and thermal loading of the building. The logistics of biomass fuel storage and automatic feed systems should be considered in construction planning and engineering.

VI. Development Alternatives

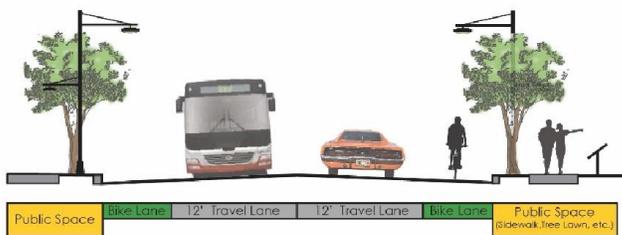
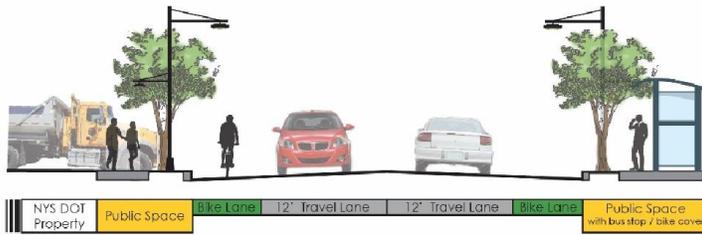
A. Project Amenities

One of the goals of the Park would be to enhance the atmosphere and provide a unique working experience for any tenants locating within the Park. The following items should be considered for the Park:

- Bicycle lanes
- Walking paths and gazebos or picnic areas
- Benches
- Street lighting
- Bicycle parking enclosure/Bus Stop

Dedicated bicycle lanes would provide safety throughout the park for bicyclists. Walking paths would also create a unique campus experience for tenants within the Park. Trees and buffers will be important to provide shade and potentially reduce heating and cooling costs for tenants.

Some options for roadway cross sections are shown in the figure below:



Typical Roadway Cross Section Options

The cost for some these items has been included in the cost estimates for the project as outlined in the following sections. As plans for the Park become more defined, these items should be reviewed as part of the overall master plan and budget.

A. Phasing

As the marketing study indicates, the supply of office space in the Ithaca area currently exceeds the demand. However, there may be other industry potentials and office space demand in the future to develop the Park to its full potential. For this reason, it would be beneficial to the County to consider a phased development approach.

The master plan developed for this study has been separated into three (3) areas for comparison as follows:

- Phase 1: NYSDOT Facility & Shovel Ready Enablement
- Main Campus
- Western Expansion

B. Phase 1: NYSDOT & Shovel Ready Enablement

As discussed with the County during this study, the New York State Department of Transportation (NYSDOT) would like to construct a new 56,000 square foot facility in the Ithaca Area. This facility would consist of office space, workshop space, truck parking and salt storage.

In conjunction with the NYSDOT Facility, the County would like to construct an adequate level of infrastructure to enable some of the development for “shovel ready” marketing. The first phase of the project would include constructing the main access road, water main, sewer main and electrical service in order to establish the NYSDOT facility as the first tenant within the Park while also providing an opportunity for “shovel ready” sites within the planned Park. The County can then focus its efforts on attraction and market the site to potential tenants. A Phase 1 conceptual plan for the NYSDOT facility is shown in Figure 4.

This would include the construction of the following items (all lengths are approximate):

- 950 linear feet of new access roadway with bicycle lanes
- 900 linear feet of new water main
- 900 linear feet of new sanitary sewer main
- 900 linear feet of new electric

The following is a summary of the total capital costs for Phase I of the project:

Phase I	Total Capital Cost
Utilities	\$306,500
Roadway (with Bicycle Lanes)	\$310,000
Soft Costs (35%)	\$215,900
Total Project Capital Cost:	\$832,400

Cost estimates for the first phase of the project discussed above are included in Appendix B.

C. Main Campus

The conceptual master plan developed for the main campus is shown in Figure 5. The conceptual plan was developed to maximize the buildable acreage available within the Park while considering the site constraints. For all options considered, the New York State Department of Transportation facility will be included as the potential first tenant of the Park.

Based on this conceptual site plan, the main campus can accommodate approximately 8 buildings and 109,000 square feet of building space, plus an additional 56,000 square foot NYSDOT facility. The total square footage of building development is approximately

165,000 square feet. This does not include the southeastern corner designated for the DMV testing facility as shown on the concept plan in Figure 5.

New utilities (including water, sanitary sewer and electric) will be located along the proposed main access road, connecting at Warren Road and Cherry Road. This would include the construction of the following items (all lengths are approximate):

- 2,800 linear feet of new access roadway with bicycle lanes
- 2,800 linear feet of new water main
- 2,800 linear feet of new sanitary sewer main
- 2,800 linear feet of new electric, telephone & communications
- 24,000 square feet of walking paths (6,000 linear feet)
- 2 Gazebo/picnic areas
- 1 Bicycle cover area
- 2 bus stops and pedestrian crosswalk

Natural gas has not been shown or included in the conceptual planning. This can be adjusted after the results of the current gas supply study are known. Based on the lack of natural gas supply in the area, it has been assumed that each individual development will have to provide their own source of heating fuel or utilize alternative energy sources as discussed in the previous section of this report.

Cost estimates for the master plan discussed above are included in Appendix B. The cost estimates for the main campus include the costs of the Phase 1 project. If Phase 1 was constructed first as planned, these costs could be subtracted from the main campus buildout costs. The following is a summary of the total capital costs for the project:

Main Campus	Total Capital Cost
Utilities	\$898,000
Roadway (with Bicycle Lanes)	\$865,000
Site Amenities	\$192,000
Soft Costs (35%)	\$684,300
Total Project Capital Cost:	\$2,639,300

Other conceptual site plans were developed as part of this feasibility study. These options were not analyzed further for this study but have been included in Appendix G for reference.

D. Western Expansion

A conceptual master plan was also developed for the western expansion area and is shown in Figure 5. The conceptual plan was developed to maximize the buildable acreage available with the expansion area while considering the site constraints. The County has also expressed interest in locating a solar array on this property which has been shown in Figure 5 as well.

Based on this conceptual site plan, the western expansion can accommodate approximately 4 buildings and 60,000 square feet of building space, plus an additional 90,000 square foot solar farm. The main access road would be extended for the park and would include a new hammerhead turnaround or a cul-de-sac for fire and safety purposes. These details would be developed during the site plan approval process with the County and Fire Department. Additional access connections may also extend to Cherry Road or Triphammer Road and will be dependent on Town approval and overall development plans.

New utilities (including water, sanitary sewer and electric) will be located along the proposed main access road, connecting to the main campus infrastructure. This would include the construction of the following items (all lengths are approximate):

- 850 linear feet of new access roadway with bicycle lanes
- 850 linear feet of new water main
- 850 linear feet of new sanitary sewer main
- 850 linear feet of new electric
- 14,800 square feet of walking paths (3,700 linear feet)
- 2 Gazebo/picnic areas

Cost estimates for the western expansion discussed above are included in Appendix B. The following is a summary of the total capital costs for the project:

Western Expansion	Total Capital Cost
Utilities	\$258,250
Roadway	\$255,000
Site Amenities	\$108,400
Soft Costs (35%)	\$217,700
Total Project Capital Cost:	\$839,350

VII. Project Costs

A. Cost Estimate Summary

Cost estimates for the master plan sections as discussed above are included in Appendix F. The costs for Phase 1 are included in the overall costs for the main campus. Therefore, the following is a summary of the total capital costs for the project:

Section	Total Capital Cost
Main Campus	\$2,639,300
Western Expansion	\$839,350
Total Project Capital Cost:	\$3,478,650

B. Per Acre Cost Analysis

Based on the total infrastructure costs for the Park, legal, administration and engineering fees, and contingency, a basic per acre cost analysis is shown below. These costs only consider the main campus development campus of approximately 39.9 acres, subtracting the undevelopable southeastern corner designated for the DMV testing area.

The total cost per acre for Tompkins County based on the assumptions above is approximately \$72,400. This cost can be adjusted based on overall funding anticipated or received, available cash from other sources and potential dedication of infrastructure to the Town or County.

TOMPKINS COUNTY
AIRPORT PARK FEASIBILITY STUDY
PER ACRE COST ANALYSIS - MAIN CAMPUS ONLY
August 11, 2016

Generic Environmental Impact Statement (GEIS)

ITEM	DESCRIPTION	ESTIMATED QUANTITY	UNIT	ESTIMATED UNIT COST	ESTIMATED TOTAL COST
1	GEIS	1	EA	\$ 250,000.00	\$ 250,000
				Total GEIS Cost:	\$ 250,000

Infrastructure Construction:

ITEM	DESCRIPTION	ESTIMATED QUANTITY	UNIT	ESTIMATED UNIT COST	ESTIMATED TOTAL COST
2	Site Grading	1	LS	\$ 100,000.00	\$ 100,000
3	Roadway Construction	2,800	LF	\$ 300.00	\$ 840,000
4	Roadway Culvert Crossing	1	EA	\$ 25,000.00	\$ 25,000
5	Install New Water Main	2,800	LF	\$ 70.00	\$ 196,000
6	Install New Sanitary Sewer Main	2,800	LF	\$ 125.00	\$ 350,000
7	Install New Electric (by utility)	2,800	LF	\$ 50.00	\$ 140,000
8	Install New Communications (by utility)	2,800	LF	\$ 40.00	\$ 112,000
9	Walking Paths (Assumes 6,000 LF)	24,000	SF	\$ 3.00	\$ 72,000
10	Gazebo/Picnic Areas	2	EA	\$ 15,000.00	\$ 30,000
11	Bicycle Cover/Bus Stop	3	EA	\$ 30,000.00	\$ 90,000
Infrastructure Construction Subtotal					\$ 1,955,000
12	Construction Contingency	10	%	\$ -	\$ 195,500
13	Legal, Administration, Engineering	25	%	\$ -	\$ 488,800
Total Infrastructure Capital Cost					\$ 2,639,300

Total Estimated Project Cost: **\$ 2,889,300**
Total Acreage: 39.90
Price Per Acre: **\$ 72,414**

Less Anticipated Grants:

Potential Grant (TBD - example only)	\$ (500,000)
	\$ (500,000)
	39.90
Net reduction per acre:	\$ (12,531)

Note: Gas and electric costs have been included in the total cost per acre for simplicity. Cost sharing options may be available depending on the utility and businesses within the Park.

VIII. Conclusion and Next Steps

A. Conclusion

The Ithaca region offers many benefits to any business that may wish to settle in the area. While the County may not have a need for additional office space in the region, other industry opportunities may be available in order to develop a new industrial park. For the Airport business park to be a viable option, a strong action plan must be developed that addresses and targets obstacles that are identified in the marketing analysis.

A phased approach would benefit the Airport Business Park significantly. With the NYSDOT interested in building in the area, it would give the park its first tenant and establish an access point and utilities onsite. This would allow many parcels on the site to be shovel ready and be a viable option for developers.

B. Next Steps

The following is a list of recommended next steps for Tompkins County to consider. Some of these tasks may be completed in phases and/or in parallel with each other.

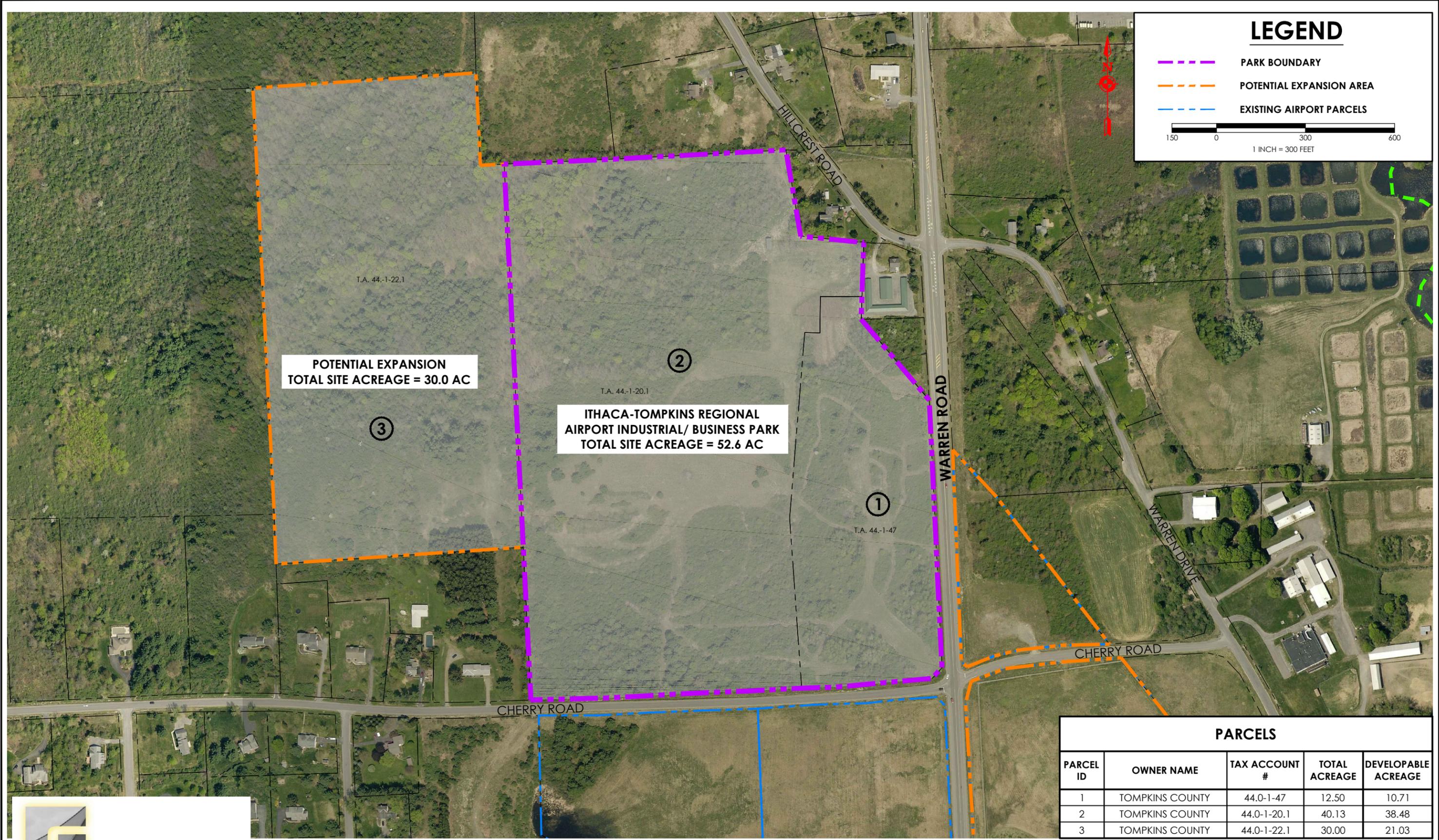
- Seek funding to implement the project
 - Sources may include the Consolidated Funding Application (CFA) through Empire State Development, USDA Rural Development programs, Office of Community Renewal (OCR), NYS Environmental Facilities Corp (EFC), the US Economic Development Agency (EDA), and the Upstate Revitalization Initiative (URI).
 - Letters of support from local businesses, property owners, government representatives and agencies should be solicited in order to be prepared for the CFA process.
 - The next CFA deadline has expired for 2016. An opportunity will be available in 2017.
 - URI funding can be submitted for at any time.
- Workforce Development
 - Review locational implications, and the attraction and training efforts needed to secure an adequate workforce.
- Utility Information
 - Conduct fire flow testing
 - Conduct geothermal testing
- Develop site land lease plan

- Preparation of a Generic Environmental Impact Statement (GEIS) as part of the State Environmental Quality Review (SEQR). This may include some or all of the following:
 - Topographical Land Surveying
 - Phase 1 Environmental Assessment
 - Archeological Studies
 - Geotechnical Studies
 - Drainage Studies
 - Wetland Delineations and Permitting
 - Wetland Avoidance and Mitigation Plans
 - Flood Plain Evaluations
 - Traffic Studies
 - Utility Studies or Coordination
 - Threatened and Endangered Species Evaluations
 - Visual Simulations, Concept Plans and Master Planning
 - Town Site Plan Approval and Rezoning
 - Subdivision Survey, Mapping, and Filing
 - New York State Shovel Ready Certifications

- Design and permitting of bid ready infrastructure to enable Shovel Ready status.

- Construct infrastructure as funding allows.

Figures



LEGEND

- - - PARK BOUNDARY
 - - - POTENTIAL EXPANSION AREA
 - - - EXISTING AIRPORT PARCELS
- 150 0 300 600
1 INCH = 300 FEET

POTENTIAL EXPANSION
TOTAL SITE ACREAGE = 30.0 AC

ITHACA-TOMPKINS REGIONAL
AIRPORT INDUSTRIAL/ BUSINESS PARK
TOTAL SITE ACREAGE = 52.6 AC

PARCELS

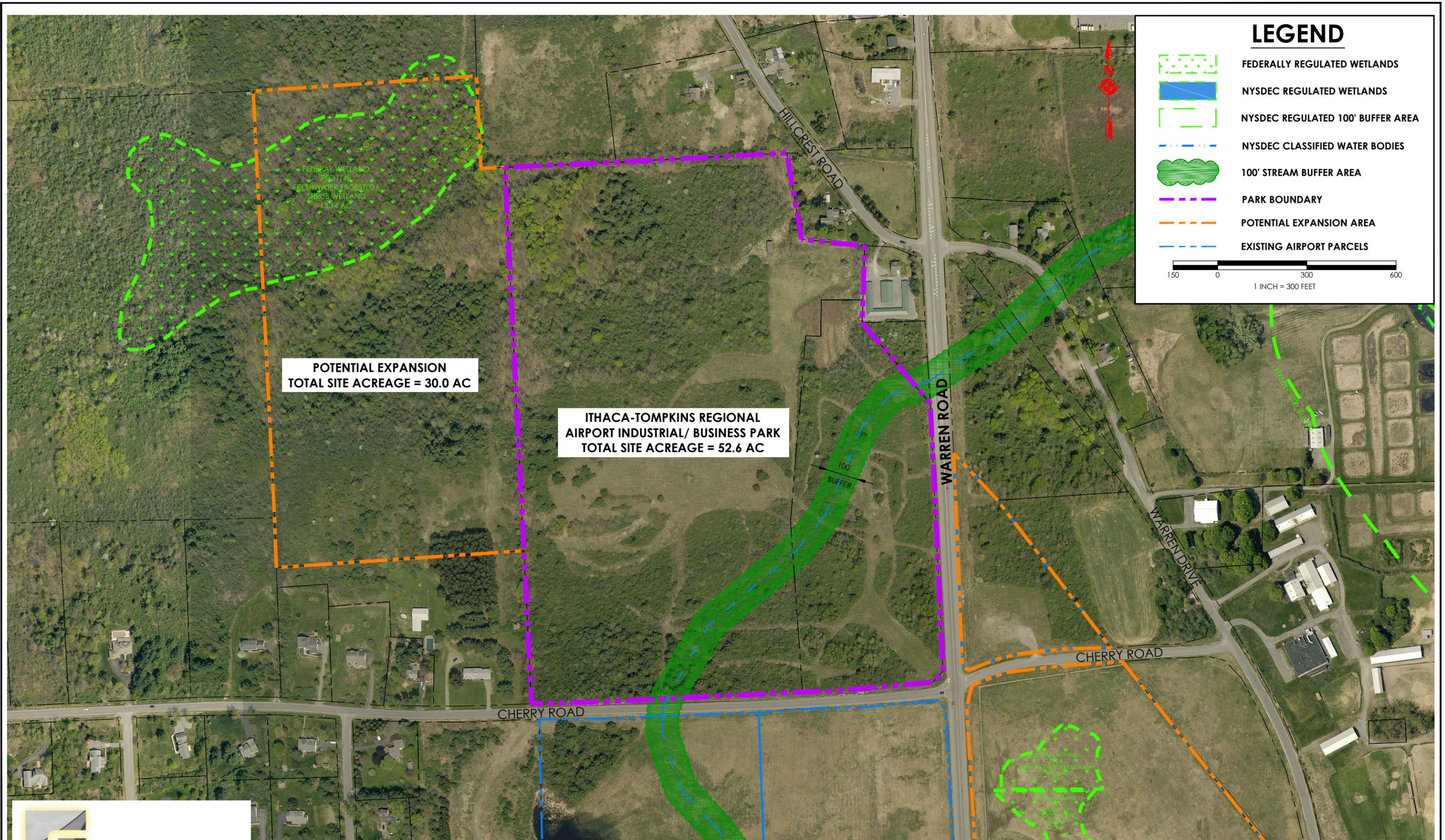
PARCEL ID	OWNER NAME	TAX ACCOUNT #	TOTAL ACREAGE	DEVELOPABLE ACREAGE
1	TOMPKINS COUNTY	44.0-1-47	12.50	10.71
2	TOMPKINS COUNTY	44.0-1-20.1	40.13	38.48
3	TOMPKINS COUNTY	44.0-1-22.1	30.00	21.03

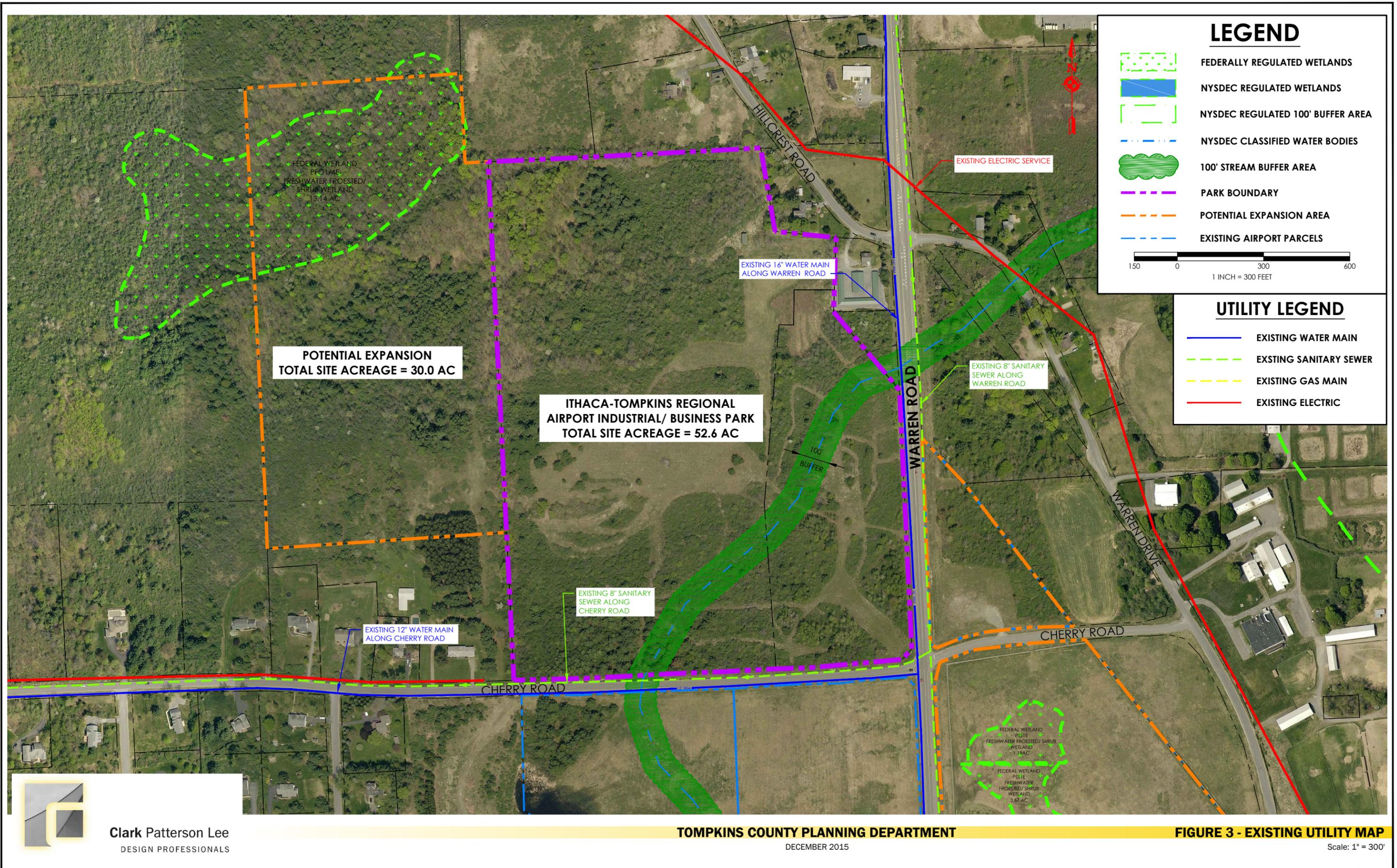


Clark Patterson Lee
DESIGN PROFESSIONALS

TOMPKINS COUNTY PLANNING DEPARTMENT
DECEMBER 2015

FIGURE 1 - PARCEL OWNERSHIP
Scale: 1" = 300'





LEGEND

- FEDERALLY REGULATED WETLANDS
 - NYSDEC REGULATED WETLANDS
 - NYSDEC REGULATED 100' BUFFER AREA
 - NYSDEC CLASSIFIED WATER BODIES
 - 100' STREAM BUFFER AREA
 - PARK BOUNDARY
 - POTENTIAL EXPANSION AREA
 - EXISTING AIRPORT PARCELS
- 150 0 300 600
1 INCH = 300 FEET

UTILITY LEGEND

- EXISTING WATER MAIN
- EXISTING SANITARY SEWER
- EXISTING GAS MAIN
- EXISTING ELECTRIC

POTENTIAL EXPANSION
TOTAL SITE ACREAGE = 30.0 AC

ITHACA-TOMPKINS REGIONAL
AIRPORT INDUSTRIAL/ BUSINESS PARK
TOTAL SITE ACREAGE = 52.6 AC

FEDERAL WETLAND
PFO1/AE
FRESHWATER FROESTED/
SHRUB WETLAND
13.14 AC

EXISTING ELECTRIC SERVICE

EXISTING 16" WATER MAIN
ALONG WARREN ROAD

EXISTING 8" SANITARY
SEWER ALONG
WARREN ROAD

EXISTING 8" SANITARY
SEWER ALONG
CHERRY ROAD

EXISTING 12" WATER MAIN
ALONG CHERRY ROAD

FEDERAL WETLAND
PSS1E
FRESHWATER FROESTED/ SHRUB
WETLAND
1.19 AC

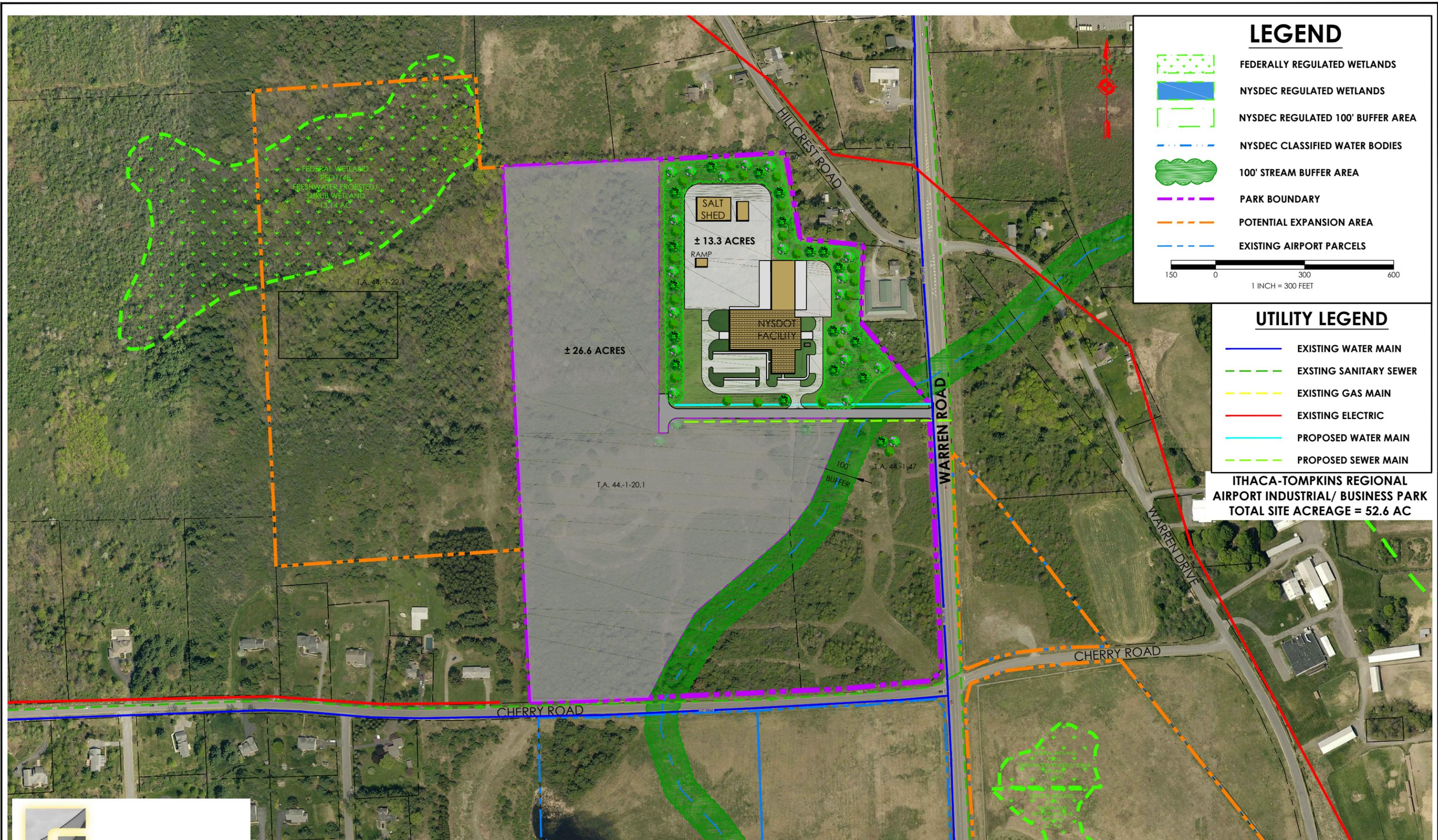
FEDERAL WETLAND
PSS1E
FRESHWATER
FROESTED/ SHRUB
WETLAND
3.67 AC



Clark Patterson Lee
DESIGN PROFESSIONALS

TOMPKINS COUNTY PLANNING DEPARTMENT
DECEMBER 2015

FIGURE 3 - EXISTING UTILITY MAP
Scale: 1" = 300'



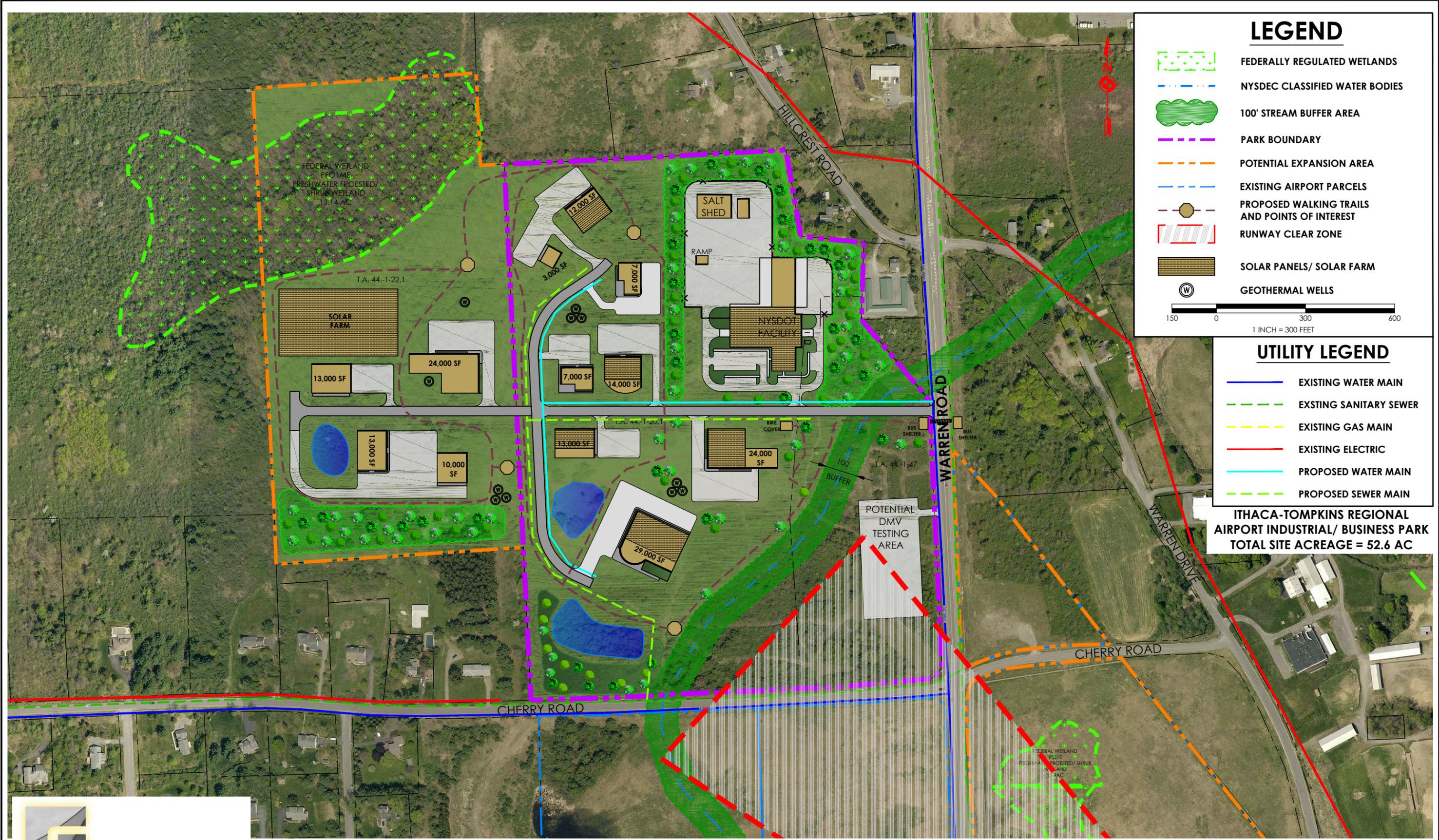
LEGEND

- FEDERALLY REGULATED WETLANDS
 - NYSDEC REGULATED WETLANDS
 - NYSDEC REGULATED 100' BUFFER AREA
 - NYSDEC CLASSIFIED WATER BODIES
 - 100' STREAM BUFFER AREA
 - PARK BOUNDARY
 - POTENTIAL EXPANSION AREA
 - EXISTING AIRPORT PARCELS
- 150 0 300 600
1 INCH = 300 FEET

UTILITY LEGEND

- EXISTING WATER MAIN
- EXISTING SANITARY SEWER
- EXISTING GAS MAIN
- EXISTING ELECTRIC
- PROPOSED WATER MAIN
- PROPOSED SEWER MAIN

**ITHACA-TOMPKINS REGIONAL
AIRPORT INDUSTRIAL/ BUSINESS PARK
TOTAL SITE ACREAGE = 52.6 AC**



LEGEND

- FEDERALLY REGULATED WETLANDS
- NYSDEC CLASSIFIED WATER BODIES
- 100' STREAM BUFFER AREA
- PARK BOUNDARY
- POTENTIAL EXPANSION AREA
- EXISTING AIRPORT PARCELS
- PROPOSED WALKING TRAILS AND POINTS OF INTEREST
- RUNWAY CLEAR ZONE
- SOLAR PANELS/ SOLAR FARM
- GEOTHERMAL WELLS



UTILITY LEGEND

- EXISTING WATER MAIN
- EXISTING SANITARY SEWER
- EXISTING GAS MAIN
- EXISTING ELECTRIC
- PROPOSED WATER MAIN
- PROPOSED SEWER MAIN

ITHACA-TOMPKINS REGIONAL AIRPORT INDUSTRIAL/ BUSINESS PARK
TOTAL SITE ACREAGE = 52.6 AC



Clark Patterson Lee
 DESIGN PROFESSIONALS

TOMPKINS COUNTY PLANNING DEPARTMENT

AUGUST 11, 2016

FIGURE 5 - CONCEPTUAL SITE PLAN

Scale: 1" = 300'

Appendix A

Market Analysis & Feasibility Study: Airport Business Park

Market Analysis & Feasibility Study: Airport Business Park Tompkins County, New York

June 2016

Prepared for:

Tompkins County Area Development (tcad.org)

Tompkins County Planning Department (tompkinscountyny.gov/planning)

Tompkins County Industrial Development Agency (www.tompkinsida.org)



120 West Avenue, Suite 303
Saratoga Springs, NY 12866

518.899.2608

www.camoinassociates.com

About Camoin Associates

Camoin Associates has provided economic development consulting services to municipalities, economic development agencies, and private enterprises since 1999. We specialize in real estate market analysis to evaluate the feasibility and impacts of proposed projects. Through the services offered, Camoin Associates has had the opportunity to serve EDOs and local and state governments from Maine to California; corporations and organizations that include Lowes Home Improvement, FedEx, Volvo (Nova Bus) and the New York Islanders; as well as private developers proposing projects in excess of \$600 million. Our reputation for detailed, place-specific, and accurate analysis has led to projects in 27 states and garnered attention from national media outlets including *Marketplace* (NPR), *Forbes* magazine, and *The Wall Street Journal*. Additionally, our marketing strategies have helped our clients gain both national and local media coverage for their projects in order to build public support and leverage additional funding. The firm currently has offices in Saratoga Springs, NY; Portland, ME; and Brattleboro, VT. To learn more about our experience and projects in all of our service lines, please visit our website at www.camoinassociates.com. You can also find us on Twitter [@camoinassociate](https://twitter.com/camoinassociate) and on [Facebook](https://www.facebook.com/camoinassociate).

The Project Team

Christa Franzl

Senior Economic Development Specialist, Project Manager

Tom Dworetzky

Economic Development Analyst, Project Staff



Table of Contents

Summary Report.....	1
Project Overview	1
Findings Summary	1
Market Assessment.....	4
Ithaca Region Market Overview	4
Regional Assets & Challenges.....	9
Supply & Demand Analysis.....	11
Financial Feasibility Analysis.....	17
Supplemental Information.....	20

Summary Report

Project Overview

The team of Clark Patterson Lee and Camoin Associates (i.e. the Consultant Team) has been retained to complete a development feasibility analysis to understand the potential for airport owned property to support new industrial and commercial office space. The goal of this work is to create a Feasibility Plan that aligns with the Ithaca-Tompkins Regional Airport's planning, the Tompkins County Economic Development Strategy and the Tompkins County Comprehensive Plan as well as providing new opportunities for commercial or industrial development.

The scope of this work includes:

- Market Assessment
- Sketch Plan
- Infrastructure Analysis
- Shovel Ready Analysis
- Financial Feasibility Analysis

This reports presents the results of the first phase of the analysis completed by Camoin Associates, which includes a market assessment highlighting opportunities and constraints for industrial and commercial development. Clark Patterson Lee will take the findings from the market research and develop a sketch plan for the airport properties grounded in market realities.

Once Clark Patterson Lee provides development scenarios and cost estimates for associated infrastructure improvements, Camoin will prepare a financial feasibility study from the perspective of the Airport/investor. Utilizing projections on price/rental points, construction and operating costs, market capture, and other key economic and financial information, the financial feasibility analysis will estimate pre-tax cash flows to the Airport that will reflect possible leasing options and funding required from outside sources to make the project financially viable (i.e. the "funding gap").

Findings Summary

The market analysis involved a review of prior reports and existing materials, analysis of economic trends (past and projected), real estate market research, and phone interviews with regional industry and market experts (brokers, developers, investors, lenders, etc.) to obtain further data on the real estate market and overall economic trends.

Findings from the market research are summarized below. Detailed results of the research and analysis can be found in the body of this report.

General Market Trends

- Small but healthy real estate market. Slow, consistent growth (real estate & overall economy).
- Uncertainty around energy infrastructure constrains development for some areas.
- Negative community attitudes toward development create challenges for growth.

Demand

- Strong professional services sector will drive demand for office space.

- Projected 200,000 SF of additional office space needed by 2025; however, there are plans for well over 500,000 SF of new space to enter the local market, creating an oversupply of 400,000 SF. (Note: The oversupply estimate includes existing vacancies.)
- Small office suites (2,000 to 4,000 SF) are the most in demand with the ability to accommodate 2-10 people.
- Limited high-quality "Class A" office space available.
- Minimal need for space to accommodate manufacturing in the future.
- Declining manufacturing sector in part due to infrastructure constraints, geographic isolation from large markets, and lack of interstate access. Nationally, supply chain management and access to a skilled workforce are driving growth and locational decisions in this sector.
- High-tech manufacturing (specifically semiconductor manufacturing) is an exception.
- "Incredibly difficult" to attract businesses to Ithaca from other locations.
- Difficult to retain new businesses started in Ithaca.
- Significant startup community, but space needs are small. Prefer "asset light" models.
- Established Ithaca businesses are the most likely source of future demand for space (not relocation from outside), particularly R&D firms that have a reason to be located near Cornell.

Supply

- Cornell Technology Park has development pads available – most desirable location in the region.
- South Hill Business Campus has plans for expansion once the market exists.
- Property owners with vacant space tend to seek out tenants, and not vice versa.
- Supply in the development pipeline includes the Emerson property, though the final mix of uses is not yet determined.
- Over 600,000 SF of office space vacant, planned, or in the pipeline.
- "Easy" to find office space in region. Lab space, harder and must typically be customized.

Considerations

- Weak demand, absorption will be slow.
- High quality space is needed.
- Flexibility to adapt to market fluctuations will be critical.

To be successful, the airport property will need to differentiate from other properties already on the market or in the development pipeline. Possible differentiating factors include:

- Accommodations to attract younger/tech workforce. Creative things business parks are doing to compete with downtown environments include:¹
 - Accommodate the bike-to-work culture with wide bike lanes, trails, and weather-protected bike parking.
 - Utilize open space with parks, recreational trails, and athletic fields. Example: [Luther Forest Bike Trails](#) in Malta, New York (Downtown areas cannot compete with the space.)
 - Design with smaller streets and wider sidewalks to promote walkability and offer an urban feel.
 - Allow and promote a mix of uses including fitness centers, rooftop decks, and child care centers.
 - Offer a unique food court or arrange for food trucks; [Farm to Fork](#) might be a great partner.
 - Create programming and activities
- Industries and businesses specifically interested in using green energy sources (photovoltaic, geothermal). Regional activity in this sector is a plus.
- Airport co-location opportunities

¹ [The Research Triangle Park \(RPT\)](#) near Raleigh, NC is the gold standard for implementing creative strategies to compete with downtown urban environments. These strategies are [outlined in the park Master Plan](#). This and other case studies are presented in a recent Economic Development Navigator post: [Are innovation districts remaking or obsoleting university research parks?](#)

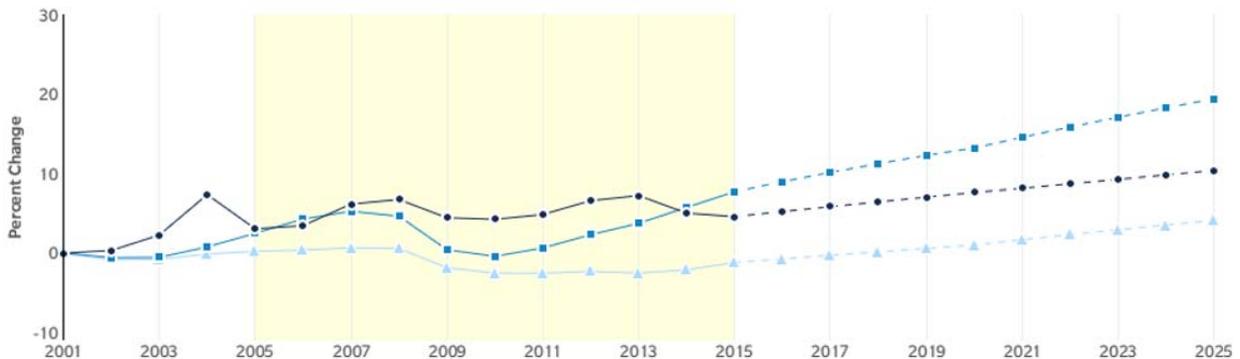
Market Assessment

Ithaca Region Market Overview

Employment Trends

Tompkins County added about 800 jobs over the last 10 years, representing an increase of 1.5%. It compared favorably to Upstate New York overall, which experienced a decline of 1.4%, but lagged considerably behind national growth of 5.1%. Employment trends are plotted in the chart below, which illustrates the impact of the 2008 recession and subsequent recovery.

Employment Trends



Region	2005 Jobs	2015 Jobs	Change	% Change
● Tompkins County	54,407	55,213	806	1.5%
■ Nation	148,660,331	156,237,788	7,577,457	5.1% ✘
▲ Upstate New York	3,009,106	2,966,486	-42,620	-1.4% ✘

Industry Trends

The Tompkins County economy is heavily based around education, with almost one third of all the county's jobs falling within the Educational Services sector. This high concentration is evidenced by the county's location quotient (LQ) of 12.62 for this sector.² This indicates that employment in the Educational Services sector in Tompkins County is over 12 times more concentrated than it is in the nation as a whole. This sector is responsible for bringing money into the region and a critical driver of the economy. Higher educational institutions including Cornell University and Ithaca College comprise the vast majority of economic activity in this sector.

² A location quotient (LQ) quantifies the concentration of a particular industry as compared to the nation. An LQ greater than 1 for a particular industry indicates that that industry is more concentrated in the study region than it is for the nation overall.

Due to the dominance of the Educational Services sector in regional employment, all other 2-digit NAICS sectors³ have relatively low location quotients. The Agriculture, Mining, and Utilities sectors all have LQs of about 1, indicating they are about as concentrated in Tompkins County as they are nationally. All other sectors have LQs below 1. While these sectors may not be highly concentrated, in many cases, they have shown strong growth.

Employment growth in Tompkins County was driven by the Accommodation and Food Services sector, which added 578 jobs; Educational Services (+384 jobs); and Professional Scientific and Technical Services (+285 jobs). Retail Trade and Manufacturing exhibited the highest job losses over the period, losing 442 and 381 jobs, respectively.

Due to infrastructure constraints, geographic isolation from large markets, and lack of convenient interstate access, the Ithaca region is an increasingly poor fit for many manufacturing industries, especially those dependent on the physical transport of goods. High-tech manufacturing is the exception, as access to a talented workforce (something that Ithaca is well known to provide) supersedes infrastructure and transportation concerns.

Historic Job Growth by Sector, Tompkins County, 2005–2015							
NAICS	Description	2005 Jobs	2015 Jobs	2005 - 2015 Change	2005 - 2015 % Change	Current Total Earnings	2015 Location Quotient
11	Crop and Animal Production	673	681	8	1%	\$42,621	1.01
21	Mining, Quarrying, and Oil and Gas Extraction	292	265	(27)	(9%)	\$86,635	1.01
22	Utilities	308	202	(106)	(34%)	\$130,440	1.01
23	Construction	1,373	1,316	(57)	(4%)	\$44,497	0.45
31	Manufacturing	4,026	3,645	(381)	(9%)	\$78,417	0.83
42	Wholesale Trade	519	512	(7)	(1%)	\$51,927	0.24
44	Retail Trade	5,372	4,930	(442)	(8%)	\$31,290	0.86
48	Transportation and Warehousing	616	594	(22)	(4%)	\$48,205	0.33
51	Information	647	560	(87)	(13%)	\$57,728	0.54
52	Finance and Insurance	1,079	1,167	88	8%	\$73,133	0.53
53	Real Estate and Rental and Leasing	754	606	(148)	(20%)	\$38,403	0.66
54	Professional, Scientific, and Technical Services	2,663	2,948	285	11%	\$69,067	0.84
55	Management of Companies and Enterprises	37	248	211	570%	\$52,520	0.32
56	Administrative and Support Services	795	947	152	19%	\$32,965	0.27
61	Educational Services	17,201	17,585	384	2%	\$66,150	12.62
62	Health Care and Social Assistance	5,473	5,613	140	3%	\$51,963	0.81
71	Arts, Entertainment, and Recreation	631	658	27	4%	\$19,044	0.71
72	Accommodation and Food Services	3,364	3,942	578	17%	\$21,476	0.85
81	Other Services (except Public Administration)	1,676	2,124	448	27%	\$25,489	0.80
90	Government	6,818	6,597	(221)	(3%)	\$73,244	0.77
99	Unclassified Industry	88	73	(15)	(17%)	\$36,538	0.81
		54,407	55,213	806	1%	\$56,383	

Source: EMSI Complete Employment 2016.1

³ Industry data organized by the North American Industrial Classification System (NAICS). See the Supplemental Information section of this report for a detailed explanation of NAICS codes.

Significant Industries

Taking a more detailed look at growing industries, there are a number of sectors that stand out. At the 4-digit NAICS level, Restaurants and General Merchandise Stores showed the most growth in employment between 2005 and 2015, each adding over 350 jobs. Restaurants were thus strong drivers of growth in the Accommodation and Food Services super-sector. While Retail employment contracted overall, the strong performance of General Merchandise Stores (and Warehouse Clubs and Supercenters, specifically), suggest a shift in the retail landscape toward consolidation.

Overall declines in Manufacturing were belied by significant growth in specialized high-tech subindustries, including Semiconductor and Other Electronic Component Manufacturing, Machinery Manufacturing (specifically Scale and Balance Manufacturing), and Aerospace Product and Parts Manufacturing. Within the Semiconductor and Other Electronic Component Manufacturing industry, which added over 230 jobs over this ten-year period, Bare Printed Circuit Board Manufacturing, Semiconductor and Related Device Manufacturing, and Printed Circuit Assembly Manufacturing all showed significant gains.

Growth in breweries were responsible for notable job gains in Beverage Manufacturing.

Scientific Research and Development Services also experienced considerable growth adding 177 jobs. It is important to note here that NAICS is a classification of businesses by their primary activity, which means that if a manufacturing company also does some R&D, but their primary operation is production, they will be classified within the manufacturing sector. Therefore, data for the Scientific Research and Development Services is not a measure of total R&D activity in an economy.

Top 25 Industries (4-digit NAICS) by Historic Job Growth, Tompkins County, 2005–2015							
NAICS	Description	2005 Jobs	2015 Jobs	2005 - 2015 Change	2005 - 2015 % Change	Average Total Earnings	2015 Location Quotient
7225	Restaurants and Other Eating Places	2,574	2,939	365	14%	\$20,898	0.83
4529	Other General Merchandise Stores	65	429	364	560%	\$26,662	0.65
6232	Residential Intellectual & Developmental Disability, Mental Health, & Substance Abuse Facilities	458	694	236	52%	\$37,728	3.15
3344	Semiconductor and Other Electronic Component Manufacturing	198	430	232	117%	\$98,411	3.28
5511	Management of Companies and Enterprises	37	248	211	570%	\$52,520	0.32
6221	General Medical and Surgical Hospitals	941	1,118	177	19%	\$69,175	0.69
5417	Scientific Research and Development Services	401	578	177	44%	\$93,013	2.45
8111	Automotive Repair and Maintenance	275	419	144	52%	\$31,917	1.06
6111	Elementary and Secondary Schools	134	271	137	102%	\$43,197	0.71
7224	Drinking Places (Alcoholic Beverages)	83	220	137	165%	\$15,826	1.62
9039	Local Government, Excluding Education and Hospitals	2,065	2,185	120	6%	\$74,628	1.11
6116	Other Schools and Instruction	209	329	120	57%	\$28,602	1.75
6233	Continuing Care Retirement Communities and Assisted Living Facilities for the Elderly	289	406	117	40%	\$37,937	1.31
5415	Computer Systems Design and Related Services	476	590	114	24%	\$92,898	0.82
8133	Social Advocacy Organizations	176	288	112	64%	\$31,534	3.93
8141	Private Households	161	269	108	67%	\$14,143	0.87
9026	Education and Hospitals (State Government)	0	104	104	Insf. Data	\$101,462	0.10
4533	Used Merchandise Stores	67	167	100	149%	\$23,265	2.20
3339	Other General Purpose Machinery Manufacturing	89	182	93	104%	\$75,720	1.96
5418	Advertising, Public Relations, and Related Services	38	128	90	237%	\$82,024	0.64
6243	Vocational Rehabilitation Services	175	263	88	50%	\$28,296	2.12
3121	Beverage Manufacturing	17	102	85	500%	\$47,132	1.37
7211	Traveler Accommodation	407	486	79	19%	\$21,581	0.75
5613	Employment Services	225	303	78	35%	\$29,038	0.24
3364	Aerospace Product and Parts Manufacturing	263	337	74	28%	\$78,976	1.98

Source: EMSI Complete Employment 2016.1

Future Industry Growth

Job growth in Tompkins County over the next decade is projected to accelerate, with an overall anticipated employment increase of 5.6%, compared to 1.5% over the previous ten years.⁴ Most sectors will experience gains, with Educational Services and Health Care and Social Assistance each projected to add over 1,000 jobs. The most notable exception will be Manufacturing, which will continue to see significant declines, potentially further contracting by 28% and shedding 1,000 jobs by 2025.

Future Job Growth by Sector, Tompkins County, 2015–2025							
NAICS	Description	2015 Jobs	2025 Jobs	2015 - 2025 Change	2015 - 2025 % Change	Average Total Earnings	2015 Location Quotient
11	Crop and Animal Production	681	601	(80)	(12%)	\$42,621	1.01
21	Mining, Quarrying, and Oil and Gas Extraction	265	244	(21)	(8%)	\$86,635	1.01
22	Utilities	202	117	(85)	(42%)	\$130,440	1.01
23	Construction	1,316	1,584	268	20%	\$44,497	0.45
31	Manufacturing	3,645	2,642	(1,003)	(28%)	\$78,417	0.83
42	Wholesale Trade	512	616	104	20%	\$51,927	0.24
44	Retail Trade	4,930	4,964	34	1%	\$31,290	0.86
48	Transportation and Warehousing	594	606	12	2%	\$48,205	0.33
51	Information	560	581	21	4%	\$57,728	0.54
52	Finance and Insurance	1,167	1,233	66	6%	\$73,133	0.53
53	Real Estate and Rental and Leasing	606	602	(4)	(1%)	\$38,403	0.66
54	Professional, Scientific, and Technical Services	2,948	3,240	292	10%	\$69,067	0.84
55	Management of Companies and Enterprises	248	403	155	63%	\$52,520	0.32
56	Administrative and Support Services	947	1,161	214	23%	\$32,965	0.27
61	Educational Services	17,585	18,790	1,205	7%	\$66,150	12.62
62	Health Care and Social Assistance	5,613	6,731	1,118	20%	\$51,963	0.81
71	Arts, Entertainment, and Recreation	658	734	76	12%	\$19,044	0.71
72	Accommodation and Food Services	3,942	4,234	292	7%	\$21,476	0.85
81	Other Services (except Public Administration)	2,124	2,592	468	22%	\$25,489	0.80
90	Government	6,597	6,545	(52)	(1%)	\$73,244	0.77
99	Unclassified Industry	73	68	(5)	(7%)	\$36,538	0.81
		55,213	58,285	3,072	6%	\$56,383	

Source: EMSI Complete Employment 2016.1

⁴ This time period included the 2008 recession, which had a significant impact on historic growth. Refer to the Supplemental Information section of this report for an explanation of how EMSI uses historic trends to make reasonable employment projections.

Regional Assets & Challenges

The following is a summary of the key assets and challenges that drive locational decisions for the private sector businesses.

Regional Assets

- **High-Quality, Desirable Place to Live and Work** – Ithaca is known nationally for its high quality of life, with its superior schools, vibrant downtown, and numerous leisure and recreational amenities. This is probably the region's most important competitive advantage because its high quality of life and place attracts highly talented people who want to live and work in the area and access to a talented labor pool is a top factor in locational decisions for many companies.
- **Talented Workforce** – The Ithaca region has a highly educated population, attracted by the region's topnotch educational institutions and high quality of life. This workforce is innovative and entrepreneurial and continues to drive economic growth. Over 21% of Tompkins County's 25+ population has a bachelor's degree, and almost 30% has a graduate or professional degree. This compares to 16% and 13%, respectively, for Upstate New York.
- **Small Innovation Ecosystem** – Cornell University acts as an anchor for innovation in the region. Many startups have some affiliation with Cornell, either research and development, technology licenses, or student/faculty entrepreneurs that have started companies in the area. However, as these startups grow, most experience increasing pressure to relocate (see challenges below). Cornell is increasingly participating in supporting this ecosystem, having established the Regional Center for Economic Advancement (see below).
- **Cornell Research and Development** – Companies established here that have a strong tie to R&D at Cornell, are most likely to stay and grow in the region.

Challenges

- **Business Attraction and Retention** – A major challenge for the Ithaca region is business attraction and retention, which has obvious implications for the potential to fill a new business park. Interviews with real estate professionals and entrepreneurs confirmed these attraction and retention challenges. One interviewee commented that it was "almost impossible" to attract businesses to Ithaca from outside the region. Moreover, companies that are started in Ithaca are often difficult to retain not only due to limited market size but also a small labor pool. For example, while the region's colleges and universities produce a high number of highly educated workers, limited job opportunities lead to an exodus of talent from the region. This makes it difficult for established companies to expand and hire when the need arises. Moreover, the limited number of establishments in the region makes it difficult for workers to seek new jobs to advance their careers. For a worker with a highly specific skillset, for instance, only a handful of firms in the region would offer potential job opportunities.
- **Isolation from Markets and Access Limitations** – Ithaca is located over 25 miles from the nearest limited-access highway, which greatly constrains its ability to meet the transportation and logistics needs of many businesses. These access issues contribute to its isolation from major markets and constrain capabilities for the efficient distribution of goods. The City of Ithaca is over 50 miles from Syracuse, 90 miles from Rochester, and 100 miles from Scranton, PA, which represent the largest concentrations of population in its vicinity. This makes it difficult to compete with other communities with better highway access and closer proximity to population centers.

- **High Cost of Living** – The region’s high cost of living came up numerous times during market research interviews conducted for this analysis. Moreover, property taxes are perceived to be very high. The average full value combined tax rate for all jurisdictions in Tompkins County in 2014 was 33.5 per \$1,000 of full value, which ranks among the middle of the pack as the 25th highest among 57 New York counties (New York City excluded). The New York State average was 29.6.⁵ Tax rates for individual sub-jurisdictions vary considerably. For properties located within the Village and Town of Lansing (the location of the proposed airport business park), the tax rate is considerably lower than it is for properties in the City of Ithaca: 28.27 versus 37.84.⁶ The City of Ithaca would rank 11th in New York in terms of property tax if it were its own county.
- **Anti-Development Attitudes** – The perception of negative community attitudes toward development increases uncertainty and costs for real estate developers. This can dissuade developers less familiar with the area from undertaking projects within the region in favor of more developer-friendly communities.

⁵ New York State Department of Taxation and Finance.

https://www.tax.ny.gov/research/property/reports/fvtaxrates/overall_county_13.htm

⁶ Tompkins County Department of Assessment. <http://www.tompkinscountyny.gov/assessment/ratevtaxes>

Supply & Demand Analysis

Demand for Office Space

Projections of employment growth in office-utilizing industries can be used to assess the future demand for office space in the region. With the exception of Government, all office-utilizing sectors are expected to add jobs over the next 10 years. Professional, Scientific, and Technical Services and Administrative and Support Services will be key contributors to this growth, as will Social Advocacy and Civic Organizations (within NAICS 81 Other Services). In total, almost 1,200 jobs in office-utilizing industries will be added, an increase of 8.0% (compared to 5.6% for the county economy overall).

Growth in Office-Utilizing Industries, Tompkins County, 2015–2025						
NAICS	Description	2015 Jobs	2025 Jobs	2015 - 2025 Change	2015 - 2025 % Change	
11	Crop and Animal Production	681	601	(80)	(12%)	
21	Mining, Quarrying, and Oil and Gas Extraction	265	244	(21)	(8%)	
22	Utilities	202	117	(85)	(42%)	
23	Construction	1,316	1,584	268	20%	
31	Manufacturing	3,645	2,642	(1,003)	(28%)	
42	Wholesale Trade	512	616	104	20%	
44	Retail Trade	4,930	4,964	34	1%	
48	Transportation and Warehousing	594	606	12	2%	
51	Information	560	581	21	4%	
52	Finance and Insurance	1,167	1,233	66	6%	
53	Real Estate and Rental and Leasing	606	602	(4)	(1%)	
54	Professional, Scientific, and Technical Services	2,948	3,240	292	10%	
55	Management of Companies and Enterprises	248	403	155	63%	
56	Administrative and Support Services	947	1,161	214	23%	
61	Educational Services	17,585	18,790	1,205	7%	
62	Health Care and Social Assistance	5,613	6,731	1,118	20%	
71	Arts, Entertainment, and Recreation	658	734	76	12%	
72	Accommodation and Food Services	3,942	4,234	292	7%	
81	Other Services (except Public Administration)	2,124	2,592	468	22%	
90	Government	6,597	6,545	(52)	(1%)	
99	Unclassified Industry	73	68	(5)	(7%)	
Total, All Sectors		55,213	58,285	3,072	5.6%	
Office-Utilizing Industries		14,590	15,754	1,164	8.0%	

Source: EMSI Complete Employment 2016.1

Using a standard assumption of 175 rentable square feet (RSF) per worker, this employment growth will lead to the absorption of approximately 200,000 RSF of office space by 2025, or about 20,000 RSF per year. Note that this estimate considers only the new demand for office space and does not take into account the fact that vacant space may already exist within the region to meet this future need. In addition, the continued decline of manufacturing, traditionally a large space-utilizing sector, is likely to free up considerable industrial real estate (e.g. factories and warehouses) which could be repurposed as office/flex space at a relatively low cost when considered as an alternative to new construction. We also note that office users will typically need relatively small spaces—between 2,000- and 4,000-square-foot office suites, and may prefer to locate downtown since the majority of professional services office users are located in this area as opposed to in the more far-flung business parks.

New Demand for Office Space in Tompkins County by 2025			
2015 Office-Utilizing Jobs	New Office-Utilizing Jobs, 2015-2025	Rentable SF per Worker	New Demand for Office Space (RSF)
14,590	1,164	175	203,648

Source: EMSI, Camoin Associates

Sources of Demand

Startups and Technology Transfer

A potential source of future demand for office/flex space is the new companies that grow out of the region’s colleges and universities. The talented innovators and entrepreneurs cultivated by these educational institutions contribute to the strong entrepreneurial ecosystem in the region. The pipeline of new startups could be an important source for real estate demand in the future.

The **Center for Regional Economic Advancement** at Cornell University supports innovation and entrepreneurship within the region through three programs: Start-UP NY, the Southern Tier Innovation Hot Spot, and the Downtown Ithaca Incubator.

Start-UP NY is a New York State initiative to provide tax incentives to companies that commit to grow jobs in alignment with the State’s colleges and universities. Cornell was one of the first universities approved to participate in Start-UP NY in its upstate locations, and is interested in partnering with companies that have connections to its Ithaca campus or the New York State Agricultural Experiment Station in Geneva.

The **Southern Tier Innovation Hot Spot** is a partnership between Cornell, Binghamton University, Corning Inc., and the Ceramics Corridor Innovation Center. Funded by New York State, the Hot Spot provides programming and services to entrepreneurs and startup companies throughout the Southern Tier through its member business incubators. Those members are the Ceramics Corridor Innovation Center, Binghamton University’s Start-Up Suite, REV, and its in-construction Southern Tier High Technology Incubator, the McGovern Center for Venture Development in the Life Sciences.

The **Downtown Ithaca Incubator** is a partnership between Cornell, Ithaca College, and Tompkins-Cortland Community College (TC3) that recently formed to build a business incubator in downtown Ithaca, known as REV. This facility hosts workshops and events that promote entrepreneurship and startup formation as well house member startups. This space serves as the Ithaca home for the Southern Tier Innovation Hot Spot and will facilitate a

growing startup ecosystem in the area. To date, nine companies have grown out of REV, four of which have been successful. Of these four, three have moved out of REV and into other relatively small spaces in downtown Ithaca, and one has left the region.

When considering the real estate needs for startups, it is important to note that space needs are generally quite small to start, given that most startups spend a number of years with only a handful of employees. This means very limited space needs, perhaps only a few thousand square feet per business. Generally, 7 to 10 years into the business development is when an inflection point occurs and the need to hire more workers arises. Due to this time lag between startup and growth phases, it is difficult to predict what space needs will be for the region's new startups in 7 to 10 years.

Demand from Existing Businesses

Given the challenges in attracting businesses from outside the region and the unpredictable space needs of new startups, the most reliable indicator for projecting regional demand for office space is to consider the expected growth trajectory for existing businesses within the region, specifically those within existing business parks, which are discussed in the next section.

Supply of Office and Flex Space

The primary locations offering existing office and flex space within the region are Cornell Business & Technology Park, South Hill Business Campus, and Downtown Ithaca. Vacancy rates are generally low. Real estate developers we interviewed estimated that regionally, office vacancy stands at around 4% to 5%, with rates in Downtown Ithaca between 1% and 2%. While these are very healthy rates, we emphasize that new/unmet demand appears to be minimal.

Cornell Business and Technology Park

The Cornell Tech Park is considered to be the region's premier suburban office and laboratory park, providing a first-class environment for office and research firms, as well as an interface between Cornell University and the business community. A majority (62%) of the companies within the park are technology-based, many of which conduct research associated with or derived from Cornell.

The park was established in 1951 and has seen significant growth since 1986. The park sits on 200 acres adjacent to the Ithaca Tompkins Regional Airport, and consists of approximately 700,000 square feet of space distributed among 26 buildings. There is a large concentration of wet labs and clean rooms within the park. The park is owned by Cornell University and developed under ground lease arrangements with developers.

More than 80 tenant companies occupy the park, employing approximately 1,600 workers. Representative firms include:

- Advion – chip-based mass spectrometry technology
- BinOptics – laser technology
- Claritas – market research
- Kionix – development and manufacturing of micro-electro mechanical (MEMS) devices
- International Food Network – research and development of commercial food products
- US Geological Survey – water resource division

Rents in the park start at \$15 per SF, with typical rents in the \$20 to \$22 (gross) range. According to the Cornell Real Estate website, there are currently two development pads available within the park that could accommodate buildings up to 50,000 SF and 20,000 SF.

South Hill Business Campus

South Hill Business Campus (SHBC) is located about a mile south of Downtown Ithaca across Danby Rd. from Ithaca College. The campus sits on a 70-acre parcel and was originally built during the 1950s and 1970s and has since been retrofitted to accommodate modern tenant needs. It consists of 275,000 total square feet of space, of which 245,000 SF is rentable. SHBC offers office and lab space in a variety of suite sizes. It also includes industrial and storage space with open, high bay spaces with dock access and fork truck availability.

SHBC is home to a mix of about 50 tenants, ranging from office and research development to a food concessionary and a health center. The Campus has recently secured a 41,000-SF tenant relocating from the Cornell Tech Park, which will put SHBC at 90% occupancy. Lease rates range from \$12 to \$18 per SF (gross).

SHBC has a master plan that includes plans for three future buildings onsite, once a need arises in the market. The buildings would total 197,000 gross square feet in area, combined.

Downtown Ithaca

In contrast to the business park-style development of the Cornell Tech Park and South Hill Business Campus, Downtown Ithaca offers tenants the advantage of being in a mixed-use walkable environment in close proximity to amenities such as restaurants and retail, as well as diverse housing options. In general, the downtown office space inventory consists of small suites between 2,000 and 5,000 SF, with very limited supply of anything larger.

According to the Downtown Ithaca Alliance (DIA) Ithaca's total downtown office space inventory (including occupied and vacant space) is about 813,000 SF. Between 2000 and 2016, the downtown office space inventory grew by 17.8%, which is just over 1% annually.

Downtown Class A office space currently leases for approximately \$21 per SF and Class B for about \$17 per SF. Class C space is limited and ranges from \$12 to \$21 per SF. Over 25,000 feet of available office space is listed on the Downtown Ithaca website, with individual spaces ranging from 100-SF single offices up to a 7,000-SF suite. This does not include additional downtown space soon to be vacated by Chemung Canal Bank (12,000 SF) and Tompkins Trust Company (space in six different downtown Ithaca buildings).

Development Pipeline

A potentially significant project in the region's development pipeline is the Chain Works District, a redevelopment project on the site of the former Emerson Power Transmission plant on South Aurora Street between Downtown Ithaca and the South Hill Business Campus. The developer, UnChained Properties (UP), intends to create a mixed-use district to include apartments, office space, incubator and flex space, gardens and park, and areas devoted to manufacturing. As presented in its Draft Generic Environmental Impact Statement, Phase 1 would include 83,000 SF of office space and 171,000 SF of industrial space. Phase 2 would add another 186,000 SF of office space and 247,000 SF of industrial space.

Future Supply and Demand Comparison

The following table compares the future supply and demand of office space in the region. New supply is based on available information on current vacancies and future development projects. It likely somewhat underestimates future supply because it omits existing vacant space in the Cornell Business Park, Downtown Ithaca, and other locations in the region (though overall office vacancies are considered to be low). New demand was calculated in a previous section of this report based on projected increases in office-utilizing employment. While the region is expected to demand only about 204,000 SF by 2025, there are plans for well over 500,000 SF of new office space to enter the market. This would create an oversupply of over 400,000 SF of office space given existing vacancies and current economic trends. Over the next ten years, sufficient demand is unlikely to exist to fill office space that is currently planned for the region. Accordingly, any additional planned office development projects will only further contribute to this glut of space.

New Supply of Office Space	
Location	SF
Cornell Business and Technology Park	
Available Development Pads	70,000
South Hill Business Campus	
Existing Vacant Space	24,500
Future Development	197,000
Chain Works District	
Phase 1	83,000
Phase 2	186,000
Downtown Ithaca*	
Existing Vacant Space	25,000
Harold's Square Development	14,000
Chemung Canal Bank Space	12,000
Total (excludes other existing vacant space)	611,500
New Demand for Office Space (2025)	
Projected Demand from Office-Utilizing Industries	204,000
Future Oversupply of Office Space	407,500

*Excludes space to be vacated by Tompkins County Trust Company, square footage figures not available

Financial Feasibility Analysis

Camoin Associates developed a financial model for the potential Tompkins County Airport Business Park project located in the Village and Town of Lansing, as part of a feasibility study for the project. The purpose of the financial feasibility modeling component of the study is to answer two questions:

- Would a developer be able to achieve a reasonable return by investing in the business park?
- What property tax and ground lease revenues will the County receive upon full buildout?

Assumptions

In developing the model, Camoin Associates relied on the following assumptions, which are based on an analysis of the regional real estate market, discussions with County representatives, and the project concept developed by Clark Patterson Lee.

Project Phasing

The first phase of the business park includes development of a NYSDOT facility as well as an adequate level of infrastructure to enable some additional development for “shovel-ready” marketing. Phase 1 will be constructed in Year 0. The facility and land will be leased to NYSDOT as soon as construction is complete, in Year 1. The first shovel-ready site will be ground-leased in Year 2 after this phase of construction is complete.

The Main Campus, as detailed on page 10 of the Airport Business Park Feasibility Study, will be built out over the course of several years, with full occupancy achieved by the end of Year 11. Given findings from the market analysis, we assume slow absorption for the park, with approximately 10,000 SF of building space being absorbed each year on average.

The Western Expansion component of the park will not be needed for many years. We assume infrastructure expansion to allow for development on this portion of the site to occur in Year 11, once the Main Campus is fully occupied. Full absorption of space on the Western Expansion site would occur in Year 17.

Infrastructure Costs

Infrastructure will cost an estimated \$4,004,950 across all phases. Infrastructure costs to support the NYSDOT facility will total \$798,600. An additional \$2,371,800 will be needed to support buildout of the Main Campus, and \$834,550 in infrastructure investment will be required for the Western Expansion. Infrastructure costs will be funded in full by various grants at no cost to the County.

Developer Pro Forma

In order to determine whether a private developer could achieve a reasonable return by investing in the site, we created a real estate pro forma for a developable parcel within the business park. We modeled the return on developing a 24,000-square-foot office/flex building that would be representative of the type of development programmed for the park.

- **Construction Costs** – Clark Patterson Lee provided construction estimates in the range of \$250 to \$300 per square foot for office space and \$150 for light industrial/flex space. We assumed an average cost of \$225 per square foot for a mix of office and light industrial space. For a 24,000 square foot building, the total construction cost would equal \$5.4 million.
- **Lease Rates** – Market rents for office space are approximately \$20/SF for a triple net (NNN) lease, meaning that the tenant pays property tax, insurance, and maintenance in addition to base rent. Light industrial/flex space rents for approximately \$7/SF. We assumed that a prospective developer could rent space at an average lease rate of \$16.75 for a mix of 75% office and 25% light industrial space, a ratio that is in line with the concept for the business park overall.
- **Ground Lease** – Because the County will retain ownership of the underlying land, a prospective developer would have to enter into a ground lease agreement with the County. Assuming a land value of \$60,000 per acre and a rate of return to the County of 5% (comparable to permanent loan interest rates), a developer can expect to pay the County annual ground rents of \$3,000 per acre. We note that ground leases typically last 50 years or more.
- **Financing** – Given current market conditions and the development type under consideration, we assumed a loan amount of 60% of the development cost, with an interest rate of 5.0% amortized over 25 years. A 40% equity stake would be required.⁷
- **Capitalization Rate** – We assumed an 8% capitalization rate. This figure is used to calculate sale proceeds. At the end of year 10, we assume the improvements are sold, generating about \$3.0 million net of commission and after paying off all remaining debt.

Feasibility Tests

Developer: Based on a recent real estate investor survey, we have established a benchmark of 7% as the minimum internal rate of return (IRR) a private investor would accept for an office/flex use. (On average nationally, investors currently expect returns of about 11% on office/flex investment.) Given the assumptions outlined previously, the IRR on this investment is 8.5%, which is above the minimum threshold.

Bank: The debt service coverage ratio (DSCR) is a measure of the resources available to pay debt service (calculated as the ratio of net operating income to debt service payments). For this type of project, banks would require a ratio of at least 1.40. Based on the assumptions above, the DSCR is 1.43 in the first year of income generation and increases annually. Therefore, the project appears to be bankable should a reasonably creditworthy tenant be identified.

The project appears to be feasible from the perspective of both the developer and the bank.

County Revenues

The following table calculates county property tax and ground lease revenues upon full occupancy of the Main Campus of the business park (projected for year 11), as well as for the Western Expansion (year 17).

⁷ Financing terms developed from RealtyRates.com Investor Survey, 2nd Quarter 2016.

Annual County Revenues at Full Buildout			
	Main Campus (full buildout year 11)	Western Expansion (full buildout year 17)	Total
Leasable Acres	26.6	15.0	41.6
Building Space (SF)	109,000	60,000	169,000
Land Value @ \$60,000 per acre	\$ 1,596,000	\$ 900,000	\$ 2,496,000
Improvements Value @ \$225 per SF	\$ 24,525,000	\$ 13,500,000	\$ 38,025,000
Total Value	\$ 26,121,000	\$ 14,400,000	\$ 40,521,000
Annual County Property Tax Revenues @ 6.736699 per \$1,000	\$ 175,969	\$ 97,008	\$ 272,978
Annual County Ground Lease Revenues @ \$3,000 per acre	\$ 79,800	\$ 45,000	\$ 124,800

At full buildout of the Main Campus, the County can expect to collect \$175,969 in annual property tax revenues, and another \$97,008 upon full buildout of the Western Expansion. Note that this excludes school and local taxes, which would also be generated. Annual ground lease revenues will equal \$79,800 for the Main Campus and \$45,000 for the Western Expansion.

DOT Facility

Details regarding a potential arrangement between Tompkins County and the New York State Department of Transportation to relocate a DOT facility to the business park site have yet to be worked out. For planning purposes, Camoin Associates calculated the construction cost of such a facility as well as the property tax and ground lease revenues the County could expect to receive from the DOT.

The cost of the DOT facility is estimated at \$8.1 million, as determined in the table below.

DOT Facility Cost			
	SF	Cost/SF	Construction Cost
Office Building	6,400	\$ 250	\$ 1,600,000
Main Equipment	21,500	\$ 150	\$ 3,225,000
Mechanics Bay/Wash Bay	8,350	\$ 150	\$ 1,252,500
Cold Storage	5,560	\$ 150	\$ 834,000
Salt Barn	9,600	\$ 125	\$ 1,200,000
Total			\$ 8,111,500

Assuming a ground lease arrangement of \$3,000 per acre, the County will receive \$40,500 in annual ground lease revenues. The facility would not be subject to property tax.

Site Acreage		6	
Land Value per Acre	\$	60,000	
Total Land Value	\$	360,000	
Expected rate of return (comp to permanent loan int rate)		5.0%	
Ground Lease Rent (annual)	\$	18,000	\$ 3,000 per acre
Percent Annual Increase In Rent		3%	

INDUSTRIAL BUILDING

Building SF		24,000
Construction Cost per SF	\$	225
Total Development Cost	\$	5,400,000

Income

Lease (NNN) Rate per SF	\$16.75
Percent Annual Increase In Rent	3%

	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Rental Income - Office/Flex Space	\$ -	\$ 402,000	\$ 414,060	\$ 426,482	\$ 439,276	\$ 452,455	\$ 466,028	\$ 480,009	\$ 494,409	\$ 509,242	\$ 524,519
Vacancy & Collection Loss	\$ -	\$ (20,100)	\$ (20,703)	\$ (21,324)	\$ (21,964)	\$ (22,623)	\$ (23,301)	\$ (24,000)	\$ (24,720)	\$ (25,462)	\$ (26,226)
EGI	\$ -	\$ 381,900	\$ 393,357	\$ 405,158	\$ 417,312	\$ 429,832	\$ 442,727	\$ 456,009	\$ 469,689	\$ 483,779	\$ 498,293

Operating Expenses

	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Ground Lease Payments	\$ -	\$ (18,000)	\$ (18,540)	\$ (19,096)	\$ (19,669)	\$ (20,259)	\$ (20,867)	\$ (21,493)	\$ (22,138)	\$ (22,802)	\$ (23,486)
Management	\$ -	\$ (19,095)	\$ (19,668)	\$ (20,258)	\$ (20,866)	\$ (21,492)	\$ (22,136)	\$ (22,800)	\$ (23,484)	\$ (24,189)	\$ (24,915)
Total OpEx	\$ -	\$ (37,095)	\$ (38,208)	\$ (39,354)	\$ (40,535)	\$ (41,751)	\$ (43,003)	\$ (44,293)	\$ (45,622)	\$ (46,991)	\$ (48,401)
NOI	\$ -	\$ 344,805	\$ 355,149	\$ 365,804	\$ 376,778	\$ 388,081	\$ 399,723	\$ 411,715	\$ 424,067	\$ 436,789	\$ 449,892

Debt Service

Development Cost	\$	5,400,000
% Equity		40%
Equity Contribution	\$	2,160,000
Amount Financed for Construction	\$	3,240,000

Construction Period (Year 0)

Construction Rate		7.30%
Construction Period Interest	\$	236,520

Operation Period (Year 1-10)

Year 1 Loan	
Loan Origination Fee %	0.5%
Loan Origination Fee	\$ 16,200
Total Financing Costs	\$ 252,720
% Equity of Financial Costs	40%
Amount Financed for Financing Costs	\$ 151,632
Interest Rate	5.0%
Amortization	25
Term	25
Principal (Amount Financed)	\$ 3,391,632

	Financing Year 0	1	2	3	4	5	6	7	8	9	10
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Debt Service	\$ -	\$ (240,645)	\$ (240,645)	\$ (240,645)	\$ (240,645)	\$ (240,645)	\$ (240,645)	\$ (240,645)	\$ (240,645)	\$ (240,645)	\$ (240,645)
Interest	\$ -	\$ (169,582)	\$ (166,028)	\$ (162,298)	\$ (158,380)	\$ (154,267)	\$ (149,948)	\$ (145,413)	\$ (140,652)	\$ (135,652)	\$ (130,403)
Principal	\$ -	\$ (71,063)	\$ (74,616)	\$ (78,347)	\$ (82,264)	\$ (86,378)	\$ (90,696)	\$ (95,231)	\$ (99,993)	\$ (104,992)	\$ (110,242)
Year End Remaining Principal	\$ 3,391,632	\$ 3,320,569	\$ 3,245,953	\$ 3,167,606	\$ 3,085,341	\$ 2,998,964	\$ 2,908,268	\$ 2,813,036	\$ 2,713,043	\$ 2,608,051	\$ 2,497,809

Year 10 - Sale of Project

Net Operating Income Year 10	\$	449,892
Cap Rate		8.00%
Sale Value (Year 10)	\$	5,623,654
Sale Commission Rate		3.00%
Sale Commission	\$	168,710
Remaining Principal on Debt	\$	2,497,809
Sale Proceeds	\$	2,957,135

	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Income											
Rental Income	\$ -	\$ 402,000	\$ 414,060	\$ 426,482	\$ 439,276	\$ 452,455	\$ 466,028	\$ 480,009	\$ 494,409	\$ 509,242	\$ 524,519
Rental Income	\$ -	\$ 402,000	\$ 414,060	\$ 426,482	\$ 439,276	\$ 452,455	\$ 466,028	\$ 480,009	\$ 494,409	\$ 509,242	\$ 524,519
Vacancy and Credit Loss											
Vacancy and Credit Loss	\$ -	\$ (20,100)	\$ (20,703)	\$ (21,324)	\$ (21,964)	\$ (22,623)	\$ (23,301)	\$ (24,000)	\$ (24,720)	\$ (25,462)	\$ (26,226)
Effective Gross Income	\$ -	\$ 381,900	\$ 393,357	\$ 405,158	\$ 417,312	\$ 429,832	\$ 442,727	\$ 456,009	\$ 469,689	\$ 483,779	\$ 498,293
Operating Expenses											
Ground Lease Payments	\$ -	\$ (18,000)	\$ (18,540)	\$ (19,096)	\$ (19,669)	\$ (20,259)	\$ (20,867)	\$ (21,493)	\$ (22,138)	\$ (22,802)	\$ (23,486)
Management	\$ -	\$ (19,095)	\$ (19,668)	\$ (20,258)	\$ (20,866)	\$ (21,492)	\$ (22,136)	\$ (22,800)	\$ (23,484)	\$ (24,189)	\$ (24,915)
Net Operating Income	\$ -	\$ 344,805	\$ 355,149	\$ 365,804	\$ 376,778	\$ 388,081	\$ 399,723	\$ 411,715	\$ 424,067	\$ 436,789	\$ 449,892
Debt Service											
Debt Service	\$ -	\$ (240,645)	\$ (240,645)	\$ (240,645)	\$ (240,645)	\$ (240,645)	\$ (240,645)	\$ (240,645)	\$ (240,645)	\$ (240,645)	\$ (240,645)
Permanent Financing Draw		\$ 3,391,632									
Construction Financing Draw	\$ 3,240,000	\$ (3,240,000)									
Sale Proceeds											\$ 2,957,135
	\$ 3,240,000	\$ 255,792	\$ 114,505	\$ 125,159	\$ 136,133	\$ 147,436	\$ 159,079	\$ 171,071	\$ 183,422	\$ 196,144	\$ 3,166,383
Capital Outlays											
Land Cost	\$ -										
Construction & Site Prep	\$ (5,400,000)										
Loan Origination Fee	\$ (16,200)										
Construction Period Interest	\$ (236,520)										
Pre-Tax Cash Flow	\$ (2,412,720)	\$ 255,792	\$ 114,505	\$ 125,159	\$ 136,133	\$ 147,436	\$ 159,079	\$ 171,071	\$ 183,422	\$ 196,144	\$ 3,166,383
Debt Service Coverage											
		1.43	1.48	1.52	1.57	1.61	1.66	1.71	1.76	1.82	1.87
Internal Rate of Return (IRR)	8.49%										

Supplemental Information

North American Industrial Classification System (NAICS) Explained

NAICS codes are maintained by the U.S. Census Bureau and are the standard used by Federal statistical agencies in classifying business establishments. 2-digit codes are the highest aggregate NAICS code level and represent broad categories such as “retail”, whereas 4-digit industry codes present a finer level of detail such as “grocery stores”. For those interested in understanding the composition of the NAICS and for more detail about what is included in each industry, we direct the reader to <http://www.census.gov/eos/www/naics/>.

Proprietary Data Sources

Camoin Associates derived the data for this analysis from several different sources. Proprietary data providers such as EMSI, described below, pull raw data from local, state, and national government data sources as well as private and non-profit research organizations. Individual data providers apply adjustments and corrections to the data based on proprietary models, which can sometimes cause discrepancies when comparing data points from different sources.

Brief summaries of the proprietary data sources used in this analysis are provided below along with links to where additional information can be found.

Economic Modeling Specialists International (EMSI)

To analyze the industrial makeup of a study area, industry data organized by the North American Industrial Classification System (NAICS) is assessed. Camoin Associates subscribes to Economic Modeling Specialists Intl. (EMSI), a proprietary data provider that aggregates economic data from approximately 90 sources. EMSI industry data, in our experience, is more complete than most or perhaps all local data sources (for more information on EMSI, please see www.economicmodeling.com). This is because local data sources typically miss significant employment counts by industry because data on sole proprietorships and contractual employment (i.e. 1099 contractor positions) is not included and because certain employment counts are suppressed from BLS/BEA figures for confidentiality reasons when too few establishments exist within a single NAICS code.

The U.S. Census Bureau maintains NAICS codes, which are the standard used by Federal statistical agencies in classifying business establishments. 2-digit codes are the highest aggregate NAICS code level and represent broad categories such as “retail”, whereas 4-digit industry codes present a finer level of detail such as “grocery stores”. For those interested in understanding the composition of the NAICS and for more detail about what is included in each industry, we direct the reader to www.census.gov/eos/www/naics/.

ESRI Business Analyst Online

ESRI Business Analyst Online (bao.esri.com) is a web-based solution that combines GIS technology with extensive demographic, consumer spending, housing and business data for the entire United States. ESRI’s base data are the 2000 and 2010 Census. It uses proprietary statistical models and updated data from the U.S. Census Bureau, the U.S. Postal Service, and various other sources to project current statistics and future trends. ESRI data is often used for economic development, marketing, site selection, and strategic decision-making. We use ESRI to examine key patterns in consumer spending on retail and services, as well as a community demographic and socioeconomic profiles and market segmentation.

Future Jobs - Projections vs. Predictions

Projections provided in the previous sections are informed guesses based on past and current trends. EMSI creates long-term, 10-year industry projections starting from the current year (2015 for this particular report). Industry projections are based on a combination of:

- Recent trends in all industries for local geographies
- National industry projections produced by the Bureau of Labor Statistics (BLS)
- Regional projections produced by states (i.e. the New York State Department of Labor)

Most industries are projected by tracking recent county-level trends using a linear regression function based on data from 15, 10, and 5 years prior to the base year. Once this is done, state and local government industries are projected considering expected growth/decline of the local economy (rather than regression). It is also important to point out that federal government industries, including the military, are projected through linear regression at the national level. Once these initial projections are completed, EMSI performs a number of controls and adjustments based on other data sources including BLS and any state-level data that is available. While EMSI has one of the leading economic models available, no one can predict the future state of the economy. EMSI does not attempt to predict transformative events such as the 2008 recession.

Leading action to grow your economy.

Camoin Associates, Inc.
120 West Avenue, Suite 303
Saratoga Springs, NY 12866
518.899.2608
www.camoinassociates.com
@camoinassociate



Appendix B
Cost Estimates

**TOMPKINS COUNTY AREA DEVELOPMENT
AIRPORT BUSINESS PARK FEASIBILITY STUDY
AUGUST 2016**

Phase 1: NYSDOT Facility & Shovel Ready Enablement

ITEM	DESCRIPTION	ESTIMATED QUANTITY	UNIT	ESTIMATED UNIT COST	TOTAL ESTIMATED COST
On-Site Infrastructure Improvements					
1	General Site Grading	1	LS	\$ 50,000.00	\$ 50,000
2	Roadway Construction (with Bicycle Lanes)	950	LF	\$ 300.00	\$ 285,000
3	Roadway Culvert Crossing	1	EA	\$ 25,000.00	\$ 25,000
4	Furnish and Install New 12" PVC Water Main	900	LF	\$ 70.00	\$ 63,000
5	Furnish and Install New 10" SDR-21 PVC Gravity Sanitary Sewer Main	900	LF	\$ 125.00	\$ 112,500
6	Electric + Transmission line planning/engineering, right of way/easement acquisition (By Utility)	900	LF	\$ 50.00	\$ 45,000
7	Natural Gas Main planning/engineering, right of way/easement acquisition (by Utility)		LF	\$ 50.00	\$ -
8	Telephone and Communications (By Utility)	900	LF	\$ 40.00	\$ 36,000
On-Site Infrastructure Subtotal =					\$ 616,500
ESTIMATED SUBTOTAL =					\$ 616,500
CONTINGENCY (10%) =					\$ 61,700
LEGAL, ENGINEERING & ADMINISTRATION (25%) =					\$ 154,200
ESTIMATED TOTAL CAPITAL COST =					\$ 832,400

**TOMPKINS COUNTY AREA DEVELOPMENT
AIRPORT BUSINESS PARK FEASIBILITY STUDY
AUGUST 2016**

Main Campus (includes Phase 1 costs)

ITEM	DESCRIPTION	ESTIMATED QUANTITY	UNIT	ESTIMATED UNIT COST	TOTAL ESTIMATED COST
On-Site Infrastructure Improvements					
1	General Site Grading	1	LS	\$ 100,000.00	\$ 100,000
2	Roadway Construction (with Bicycle Lanes)	2,800	LF	\$ 300.00	\$ 840,000
3	Roadway Culvert Crossing	1	EA	\$ 25,000.00	\$ 25,000
4	Furnish and Install New 12" PVC Water Main	2,800	LF	\$ 70.00	\$ 196,000
5	Furnish and Install New 10" SDR-21 PVC Gravity Sanitary Sewer Main	2,800	LF	\$ 125.00	\$ 350,000
6	Electric + Transmission line planning/engineering, right of way/easement acquisition (By Utility)	2,800	LF	\$ 50.00	\$ 140,000
7	Natural Gas Main planning/engineering, right of way/easement acquisition (by Utility)		LF	\$ 50.00	\$ -
8	Telephone and Communications (By Utility)	2,800	LF	\$ 40.00	\$ 112,000
9	Walking Paths (Assumes 6,000 LF of Stone dust or other trail)	24,000	SF	\$ 3.00	\$ 72,000
10	Gazebo/Picnic Areas	2	EA	\$ 15,000.00	\$ 30,000
11	Bicycle Cover/Bus Stop	3	EA	\$ 30,000.00	\$ 90,000
On-Site Infrastructure Subtotal =					\$ 1,955,000
ESTIMATED SUBTOTAL =					\$ 1,955,000
CONTINGENCY (10%) =					\$ 195,500
LEGAL, ENGINEERING & ADMINISTRATION (25%) =					\$ 488,800
ESTIMATED TOTAL CAPITAL COST =					\$ 2,639,300

**TOMPKINS COUNTY AREA DEVELOPMENT
AIRPORT BUSINESS PARK FEASIBILITY STUDY
AUGUST 2016**

Western Expansion

ITEM	DESCRIPTION	ESTIMATED QUANTITY	UNIT	ESTIMATED UNIT COST	TOTAL ESTIMATED COST
On-Site Infrastructure Improvements					
1	General Site Grading	1	LS	\$ 50,000.00	\$ 50,000
2	Roadway Construction (with Bicycle Lanes)	850	LF	\$ 300.00	\$ 255,000
3	Furnish and Install New 12" PVC Water Main	850	LF	\$ 70.00	\$ 59,500
4	Furnish and Install New 10" SDR-21 PVC Gravity Sanitary Sewer Main	850	LF	\$ 125.00	\$ 106,250
5	Electric + Transmission line planning/engineering, right of way/easement acquisition (By Utility)	850	LF	\$ 50.00	\$ 42,500
6	Natural Gas Main planning/engineering, right of way/easement acquisition (by Utility)		LF	\$ 50.00	\$ -
7	Telephone and Communications (By Utility)	850	LF	\$ 40.00	\$ 34,000
8	Walking Paths (Assumes 3,700 LF of Stone dust or other trail)	14,800	SF	\$ 3.00	\$ 44,400
9	Gazebo/Picnic Areas	2	EA	\$ 15,000.00	\$ 30,000
On-Site Infrastructure Subtotal =					\$ 621,650
ESTIMATED SUBTOTAL =					\$ 621,650
CONTINGENCY (10%) =					\$ 62,200
LEGAL, ENGINEERING & ADMINISTRATION (25%) =					\$ 155,500
ESTIMATED TOTAL CAPITAL COST =					\$ 839,350

Appendix C

Photograph Log

Photo #1



Warren Road looking easterly at the Airport Business Park.

Photo #2



Warren Road looking southerly.

Photo #3



Warren Road looking southerly at the intersection of Cherry Road.

Photo #4



Warren Road looking westerly.

Photo #5



Cherry Road looking northerly at the Airport Business Park.

Photo #6



Cherry Road looking easterly.

Photo #7



Cherry Road looking easterly.

Photo #8



Cherry Road looking westerly toward Warren Road

Photo #9



Intersection of Warren Road and Cherry Road looking northerly towards the Airport Business Park.

Photo #10



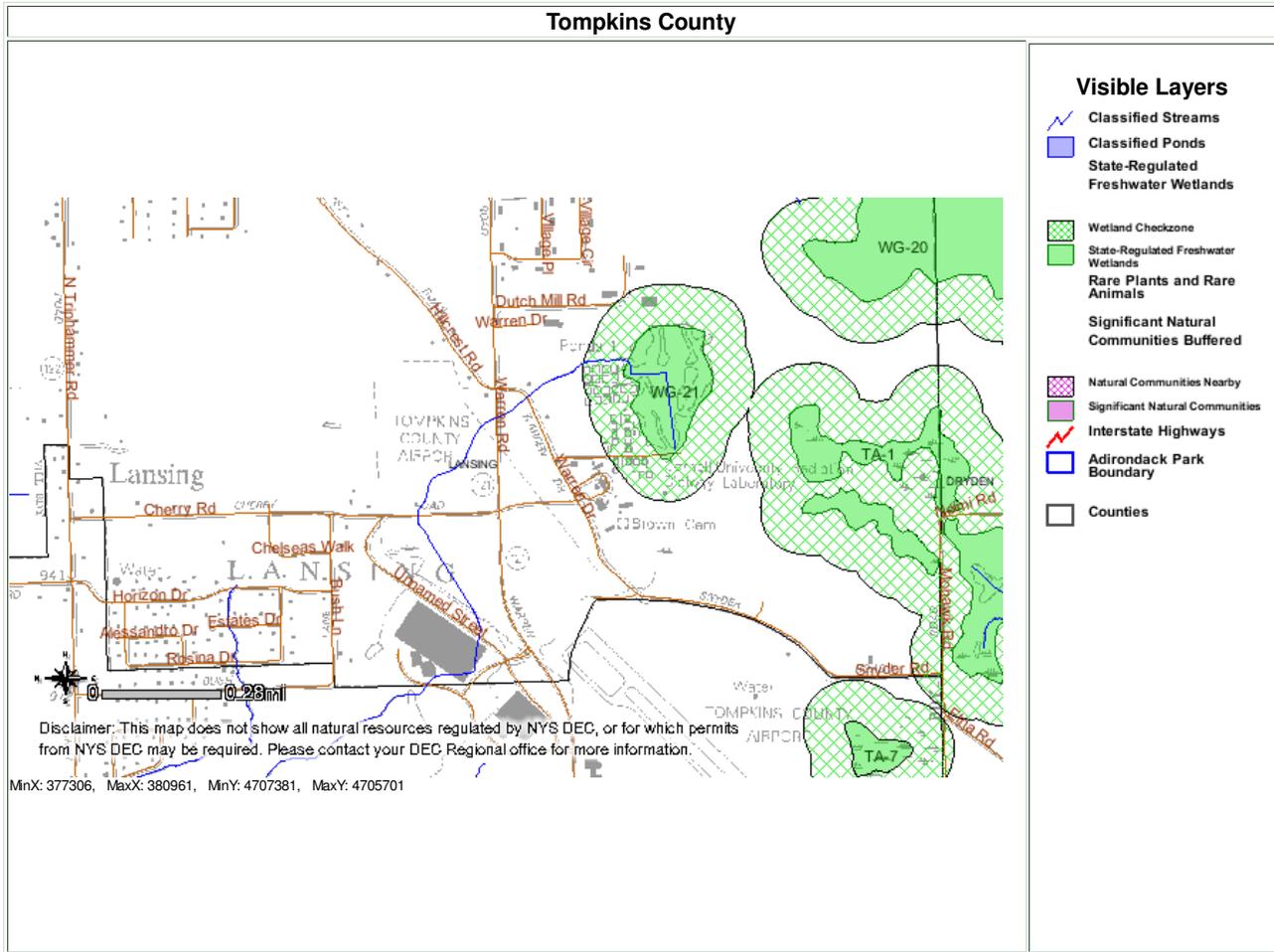
Intersection of Warren Road and Cherry Road looking southeasterly toward the Ithaca-Tompkins Airport.

Appendix D

Environmental Mapping

[print page] [close window]

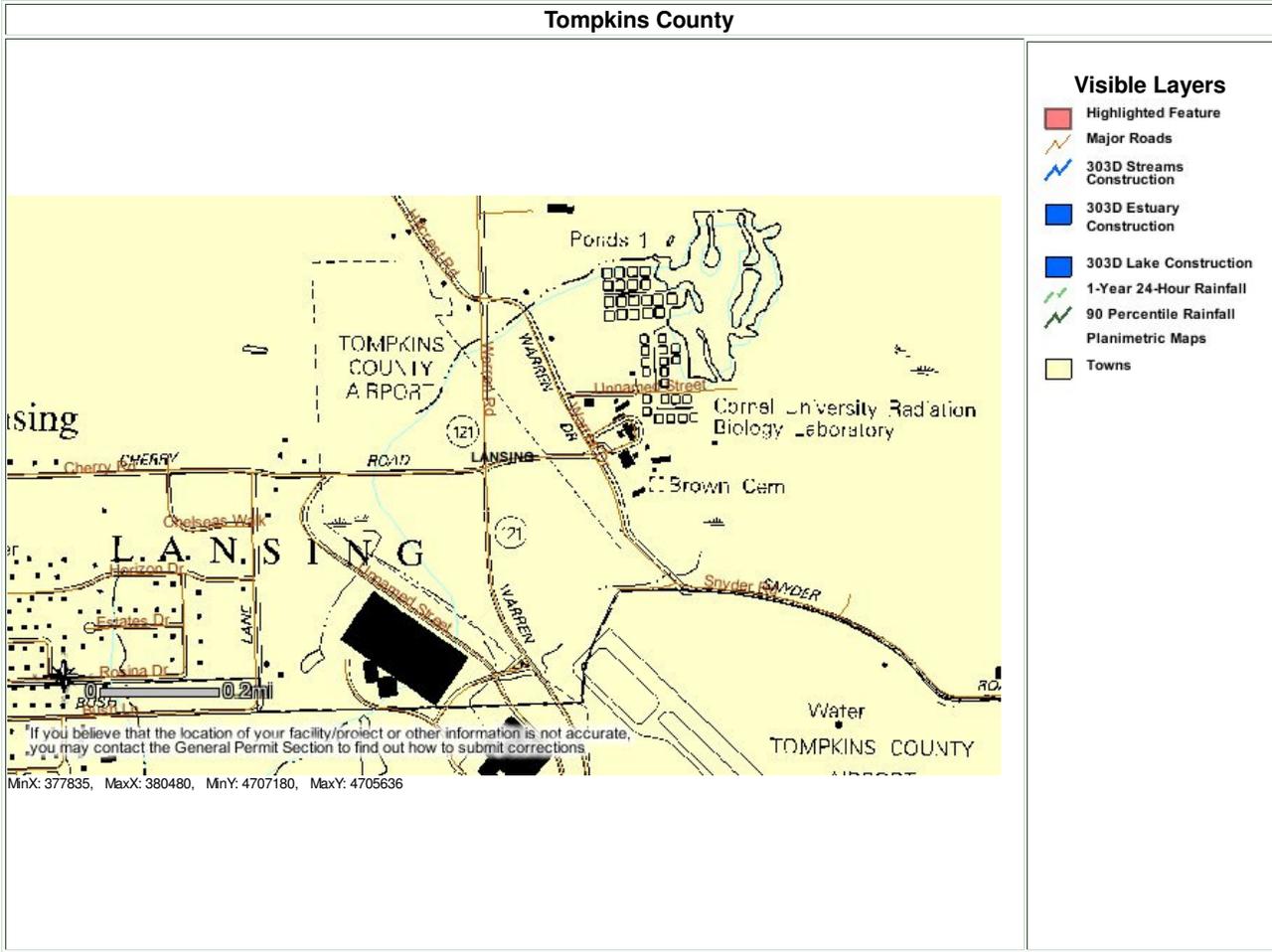
Please set your printer orientation to "Landscape".



Disclaimer: This map was prepared by the New York State Department of Environmental Conservation using the most current data available. It is deemed accurate but is not guaranteed. NYS DEC is not responsible for any inaccuracies in the data and does not necessarily endorse any interpretations or products derived from the data.

[print page] [close window]

Please set your printer orientation to "Landscape".



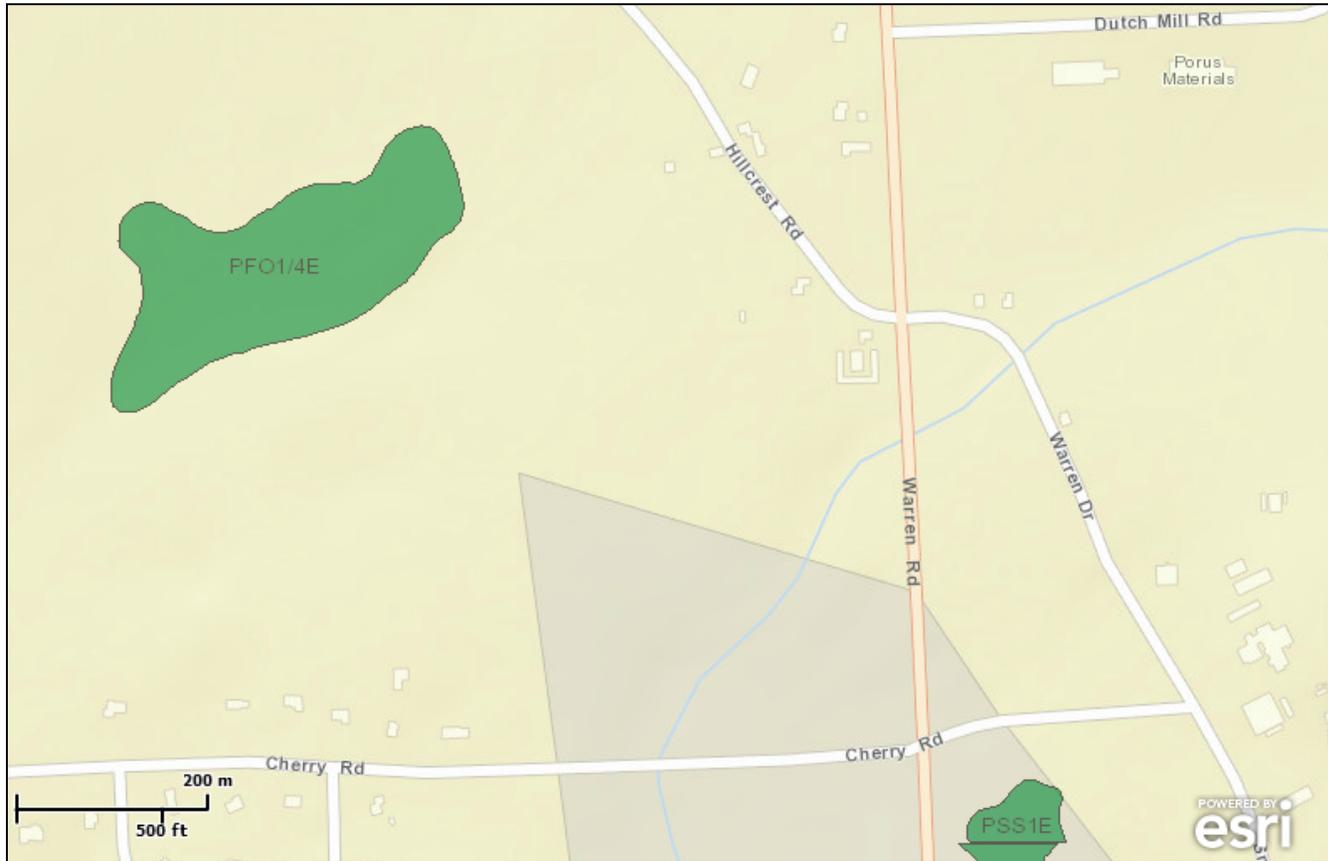


U.S. Fish and Wildlife Service

National Wetlands Inventory

Airport Business Park

Apr 19, 2016



Wetlands

- Freshwater Emergent
- Freshwater Forested/Shrub
- Estuarine and Marine Deepwater
- Estuarine and Marine
- Freshwater Pond
- Lake
- Riverine
- Other

Riparian

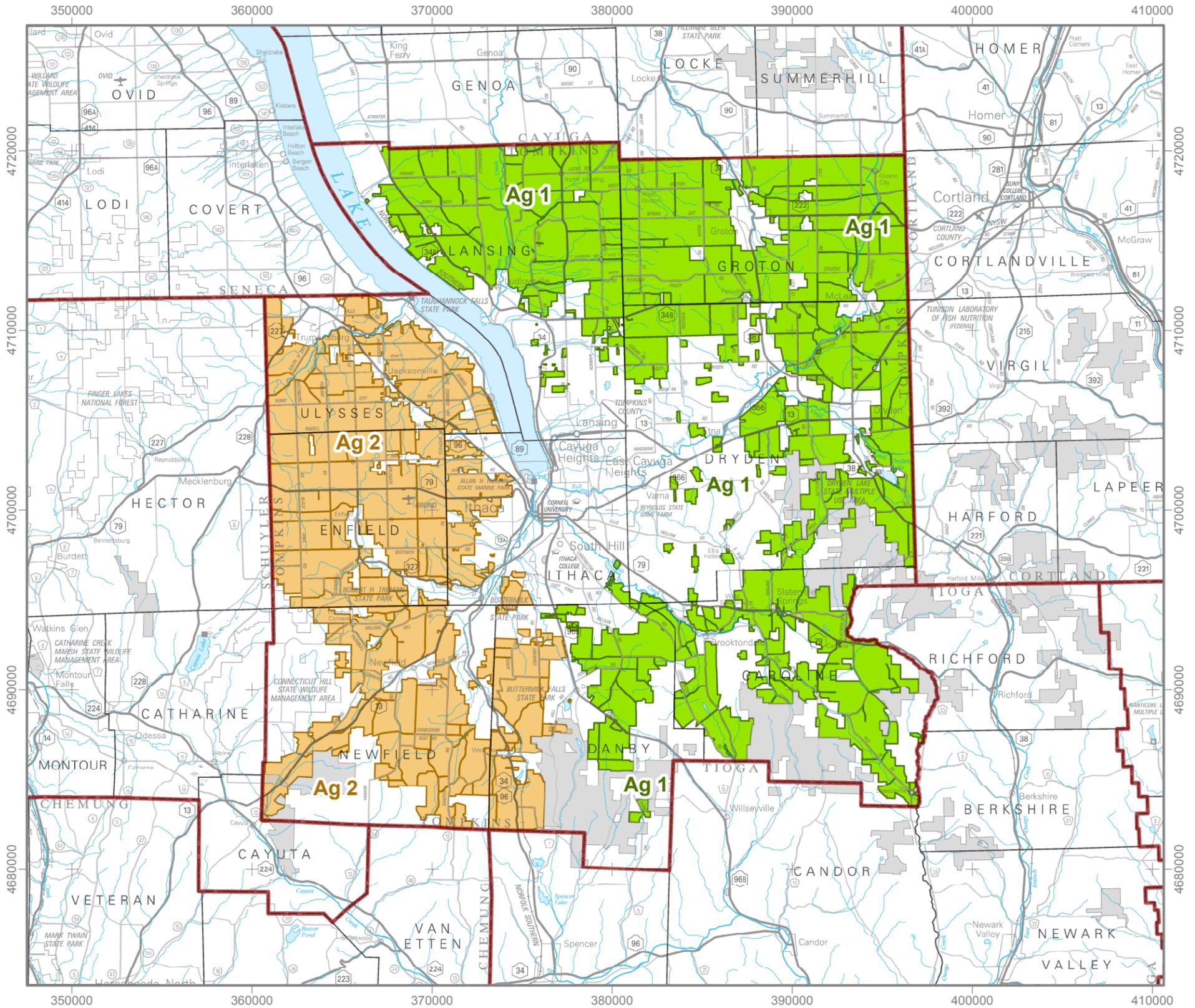
- Herbaceous
- Forested/Shrub

Riparian Status

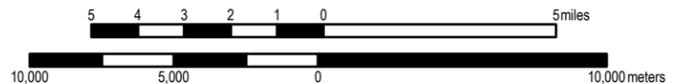
- Digital Data

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

User Remarks:



MAP PROJECTION
UTM Zone 18, NAD83 meters



KEY

Ag. District 1 

Ag. District 2 

DISTRICT CERTIFICATIONS and TOWNS

DISTRICT 1	DISTRICT 2
CERTIFIED 10/10/2013	CERTIFIED 4/7/2009
Caroline Groton	Danby Newfield
Danby Ithaca	Enfield Ulysses
Dryden Lansing	Ithaca

MAP SOURCE INFORMATION

Map created at Cornell IRIS (Institute for Resource Information Sciences) <<http://iris.css.cornell.edu>> for the NYS Department of Agriculture and Markets

Agricultural Districts boundary data is available at CUGIR (Cornell University Geospatial Information Repository) website: <<http://cugir.mannlib.cornell.edu>>

Base Map: state250_bw.tif 1998
Scale: 1:250,000; County boundaries imported from the file nyshore.e00 from the NYSGIS Clearinghouse website: <<http://gis.ny.gov>>

Contains data copyrighted by the NYS Office of Cyber Security

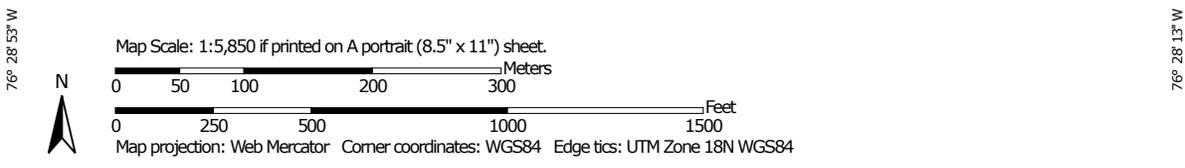
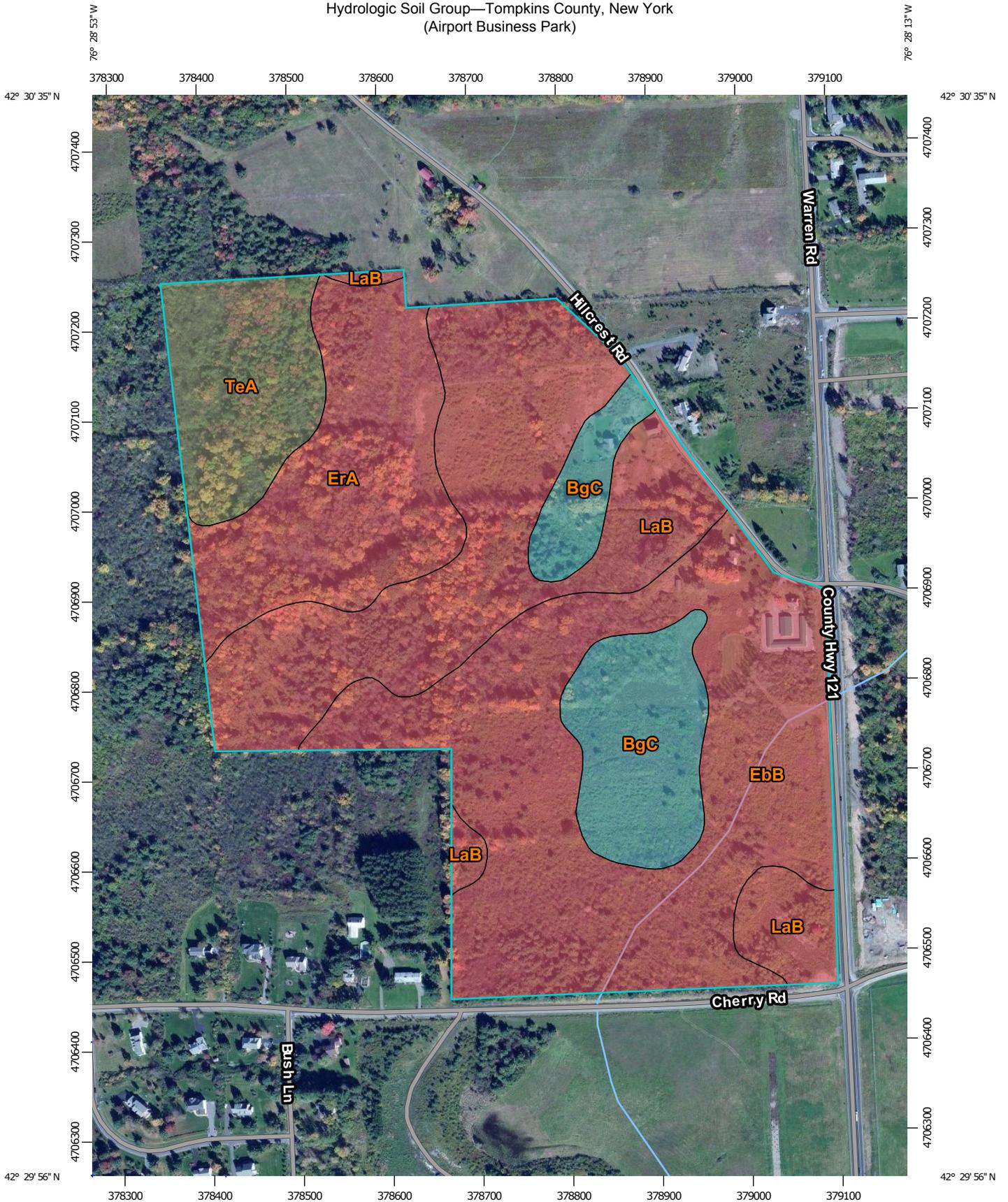
DISCLAIMER

This is a general reference to Agricultural District boundaries; not a legal substitute for actual tax parcel information.

Boundaries as certified prior to January 2014

Open Enrollment Annual Additions are not included in this data. Check with county agencies to confirm the status of individual parcels.

Hydrologic Soil Group—Tompkins County, New York
(Airport Business Park)



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

Soil Rating Polygons

 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Lines

 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Points

 A
 A/D
 B
 B/D

 C
 C/D
 D
 Not rated or not available

Water Features

 Streams and Canals

Transportation

 Rails
 Interstate Highways
 US Routes
 Major Roads
 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Tompkins County, New York
 Survey Area Data: Version 10, Sep 24, 2015

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 2, 2010—Oct 8, 2010

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Hydrologic Soil Group— Summary by Map Unit — Tompkins County, New York (NY109)				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
BgC	Bath and Valois soils, 5 to 15 percent slopes	C	12.2	11.6%
EbB	Erie channery silt loam, 3 to 8 percent slopes	D	37.4	35.5%
ErA	Erie-Chippewa channery silt loams, 0 to 3 percent slopes	D	16.6	15.7%
LaB	Langford channery silt loam, 2 to 8 percent slopes	D	29.6	28.1%
TeA	Tuller channery silt loam, 0 to 6 percent slopes	C/D	9.6	9.1%
Totals for Area of Interest			105.3	100.0%

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

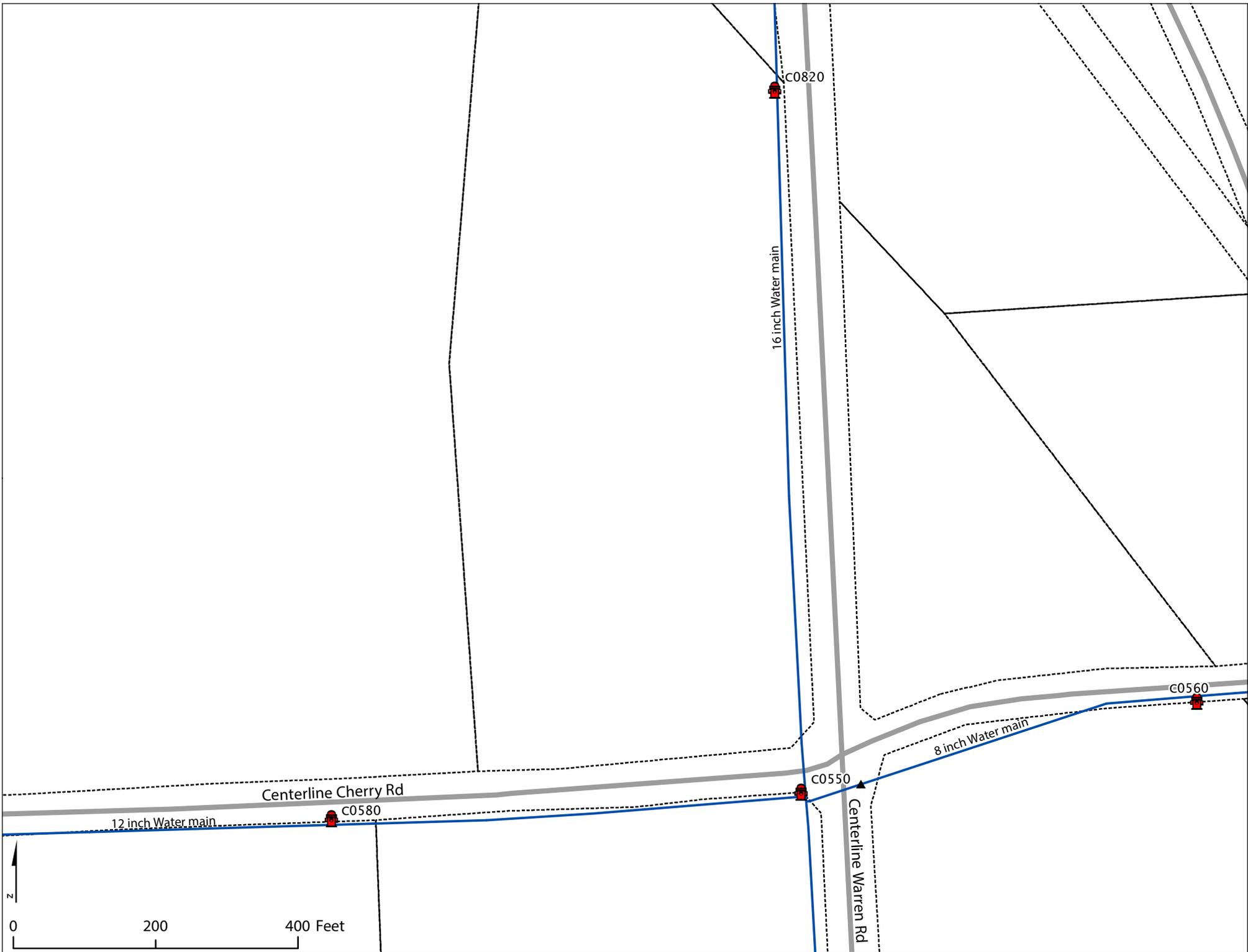
Aggregation Method: Dominant Condition

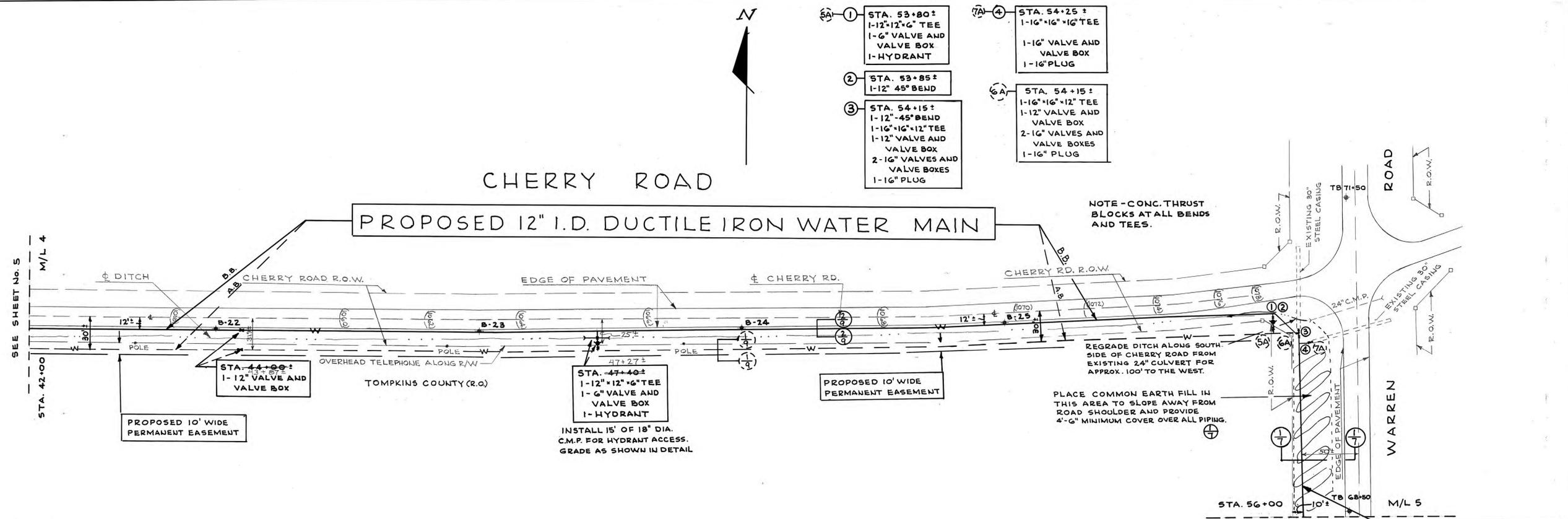
Component Percent Cutoff: None Specified

Tie-break Rule: Higher

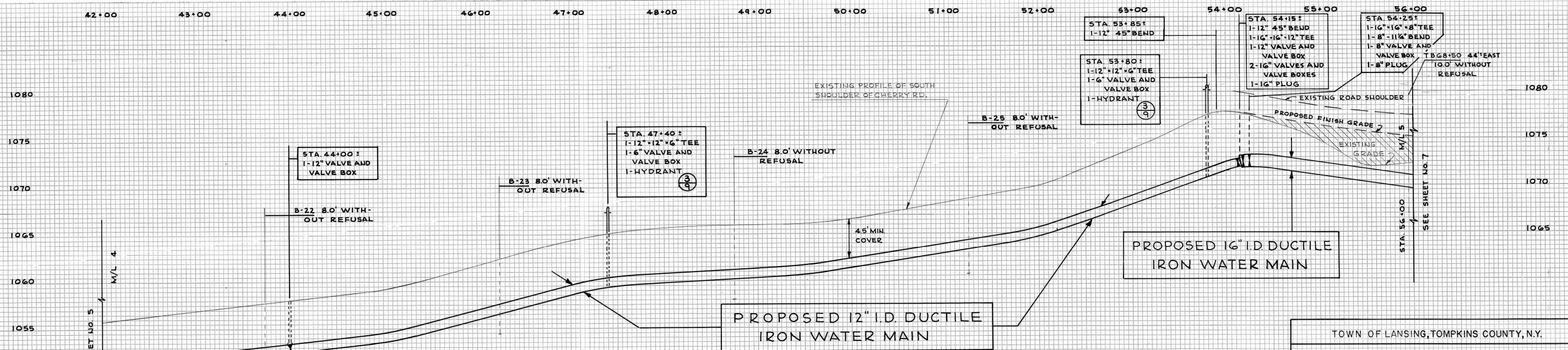
Appendix E

Utility Record Mapping





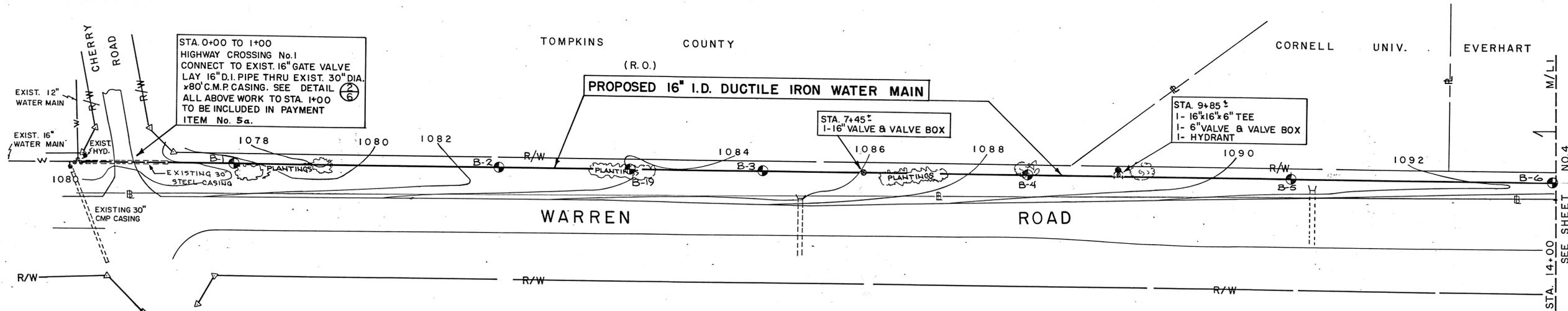
PLAN
STA. 42+00 TO STA. 56+00
SCALE 1" = 50'



CONTRACT A
BASE BID PROFILE
STA. 42+00 TO STA. 56+00
SCALES: HORIZ. 1" = 50'
VERT. 1" = 5'

"AS CONSTRUCTED" PLANS
I hereby certify that all construction required by this sheet has been accomplished as indicated herein.
By: *T.G. Miller* Date: _____

TOWN OF LANSING, TOMPKINS COUNTY, N.Y.			
LANSING WATER DISTRICT NO. 4 WATER SYSTEM CONSTRUCTION CONTRACT A			
CHERRY ROAD STA. 42+00 TO STA. 54+05 WARREN ROAD STA. 54+05 TO STA. 56+00			
T.G. MILLER P.C. and ASSOCIATES ENGINEERS AND SURVEYORS 203 N. AURORA STREET ITHACA, NEW YORK			
NOV. 1981	AS SHOWN	REV.	SHEET 6 OF 12



STA. 0+00 TO 1+00
HIGHWAY CROSSING No.1
CONNECT TO EXIST. 16" GATE VALVE
LAY 16" D.I. PIPE THRU EXIST. 30" DIA.
x80' C.M.P. CASING. SEE DETAIL (2/6)
ALL ABOVE WORK TO STA. 1+00
TO BE INCLUDED IN PAYMENT
ITEM No. 5a.

STA. 7+45
1- 16" VALVE & VALVE BOX

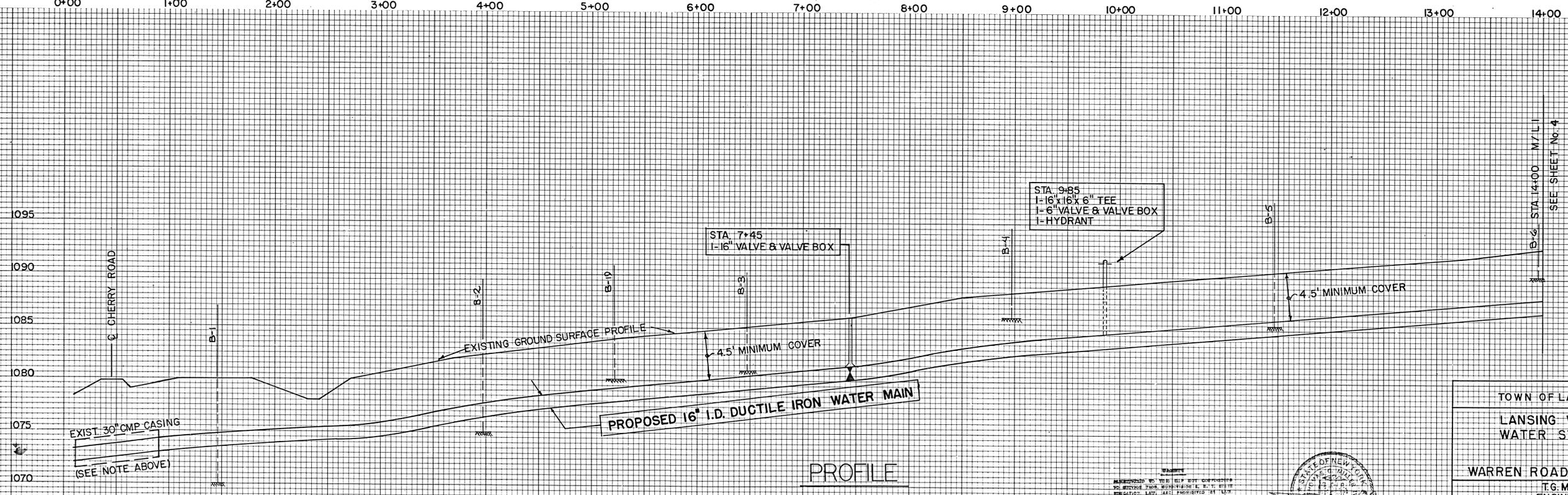
STA. 9+85
1- 16"x16"x6" TEE
1- 6" VALVE & VALVE BOX
1- HYDRANT

NOTE: INSTALL CONCRETE
THRUST BLOCKS AT ALL
BENDS AND TEES.

PLAN

SCALE: 1" = 50'

0+00 1+00 2+00 3+00 4+00 5+00 6+00 7+00 8+00 9+00 10+00 11+00 12+00 13+00 14+00



PROFILE

SCALE: HORIZ. - 1" = 50'
VERT. - 1" = 5'

WARREN
MAY 1982
ALL RIGHTS RESERVED
NO. 2243
I.T.H.A.C.A.



TOWN OF LANSING, TOMPKINS COUNTY, N.Y.	
LANSING WATER DISTRICT NO. 5 WATER SYSTEM CONSTRUCTION CONTRACT A WARREN ROAD STA. 0+00 TO STA. 14+00	
T.G. MILLER ASSOCIATES P.C. ENGINEERS AND SURVEYORS 203 N. AURORA STREET ITHACA, NEW YORK	
OCT. 1982	AS SHOWN REV. SHEET 3 OF 7



Mark O. Marini
Director - Regulatory

February 9, 2015

VIA ELECTRONIC SERVICE

Honorable Kathleen H. Burgess, Secretary
New York State Department of Public Service
3 Empire State Plaza, 19th Floor
Albany, NY 12223

Dear Secretary Burgess:

In accordance with the New York State Electric & Gas Corporation ("NYSEG" or the "Company") Gas Tariff (PSC 90, Leaf No. 86, Section 10. Conditions of Gas Service, Provision J), the Company hereby advises the New York State Public Service Commission ("PSC" or the "Commission") that it is unable to accept additional applications for gas service from new or existing customers in portions of the Ithaca franchise area.

The Company continues to receive requests for incremental natural gas services from both new and existing customers in its Ithaca franchise area. Due to current pressures on the distribution system on cold weather days and design-day predicted pressures in the Lansing area, NYSEG cannot provide the requested incremental natural gas service at this time. The area where NYSEG cannot provide incremental service is in the Town of Lansing as bounded by the lake on the west and NYS Route 13 on the south. This area is shown on the attached figure. NYSEG started work in 2014 on the Lansing/Freeville reinforcement project along West Dryden Road. NYSEG is actively working on obtaining easements from residents along West Dryden Road. To date, NYSEG has obtained approximately half of the required 100 easements. The residents own to the centerline of the road and many residents have denied NYSEG the requested 15' wide easement. The project includes 7 miles of 10" distribution main along West Dryden Road, a new regulator station at Warren Road to connect to NYSEG's existing distribution system, and a rebuild of Dominion Transmission's Freeville Gate Station serving NYSEG. NYSEG did consider other reinforcement options prior to this project and is currently re-evaluating based on the possible need for condemnations along West Dryden Road. NYSEG will continue to consider all available options in an effort to accommodate future service requests.

89 East Avenue, Rochester, NY 14649-0001
Telephone 585.771.4692, Cell 585.750.1666
Mark_Marini@rge.com

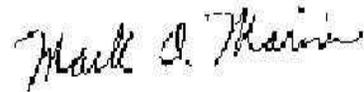
An equal opportunity employer

Honorable Kathleen H. Burgess, Secretary
February 9, 2015

Page 2

The Company will keep PSC Staff informed of any further developments regarding requests for new or increased gas service.

Respectfully submitted,

A handwritten signature in cursive script that reads "Mark O. Marini".

Mark O. Marini

Attachment

CC: Cindy McCarran - Deputy Director, Gas and Water

SENECA
COUNTY

Town of
Covert

Village of
Trumansburg

Town of
Ulysses

Town of
Enfield

Town of
Catharine

Town of Newfield

Cayuga
Lake

Town of
Lansing

Town of
Ithaca

City of
Ithaca

Town of
Danby

Town of
Lansing

Village of
Cayuga
Heights

TOMPKINS COUNTY

Town of
Dryden

Town of
Caroline

Village
of Groton

Town of
Groton

Town of Cortlandville

Town of Virgil

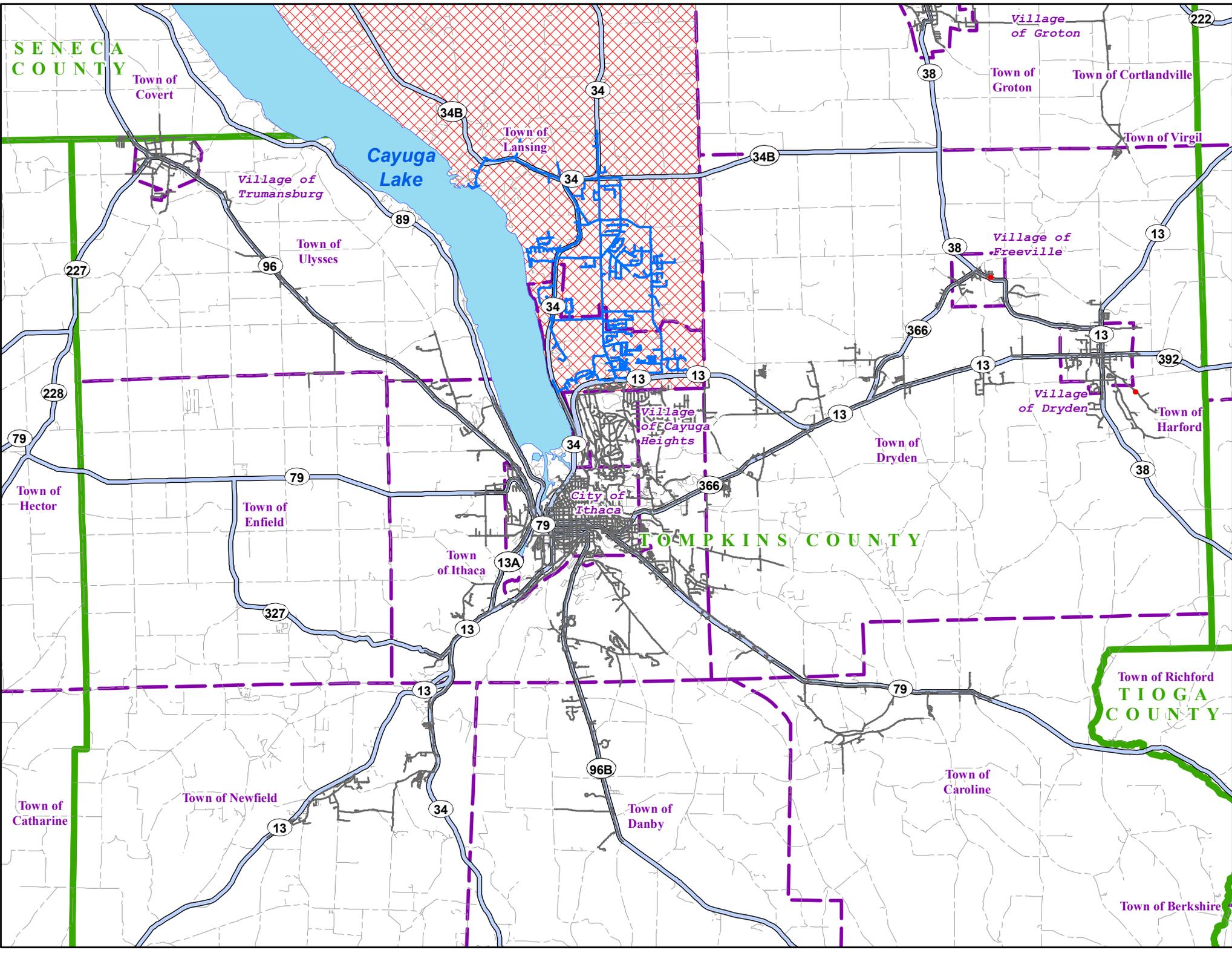
Village of
Freeville

Village
of Dryden

Town of
Harford

Town of Richford
TIOGA
COUNTY

Town of Berkshire

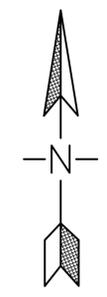


Appendix F

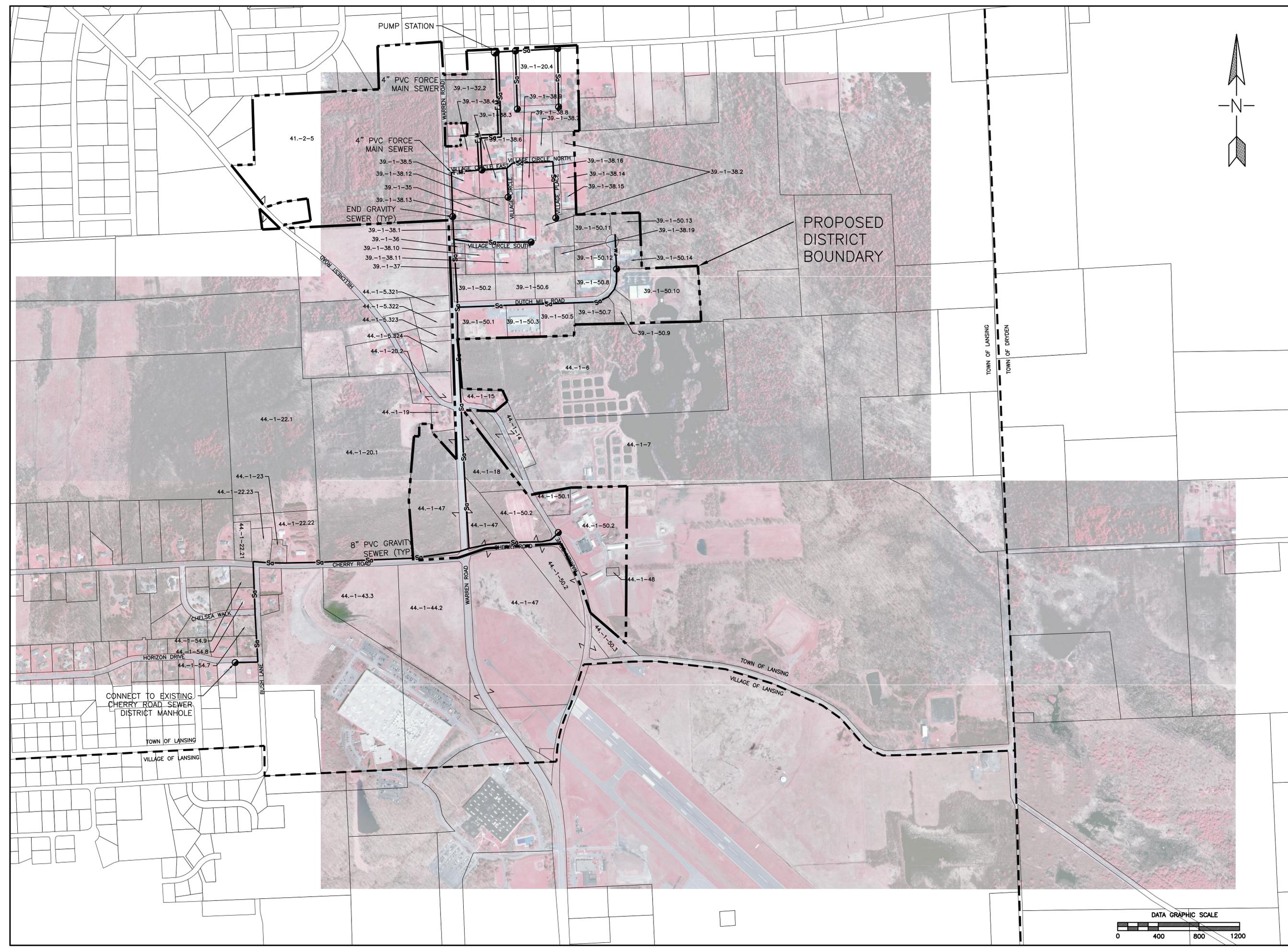
Warren Road Sewer District Map



T.G. MILLER, P.C.
 ENGINEERS AND SURVEYORS
 203 NORTH AURORA STREET
 ITHACA, NEW YORK 14850
 WWW.TGMILLERPC.COM
 607-272-6477



**WARREN ROAD SEWER DISTRICT
 TOWN OF LANSING**
 TOWN OF LANSING, TOMPKINS COUNTY, NEW YORK

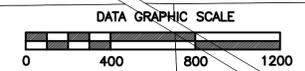


DATE	REVISION	BY
1/15/08	CHANGE IN DISTRICT BOUNDARY	JLO
5/23/08	EXPAND DISTRICT BOUNDARY TO INCLUDE 41-2-5	JLO



SHEET TITLE
 PROPOSED SEWER DISTRICT

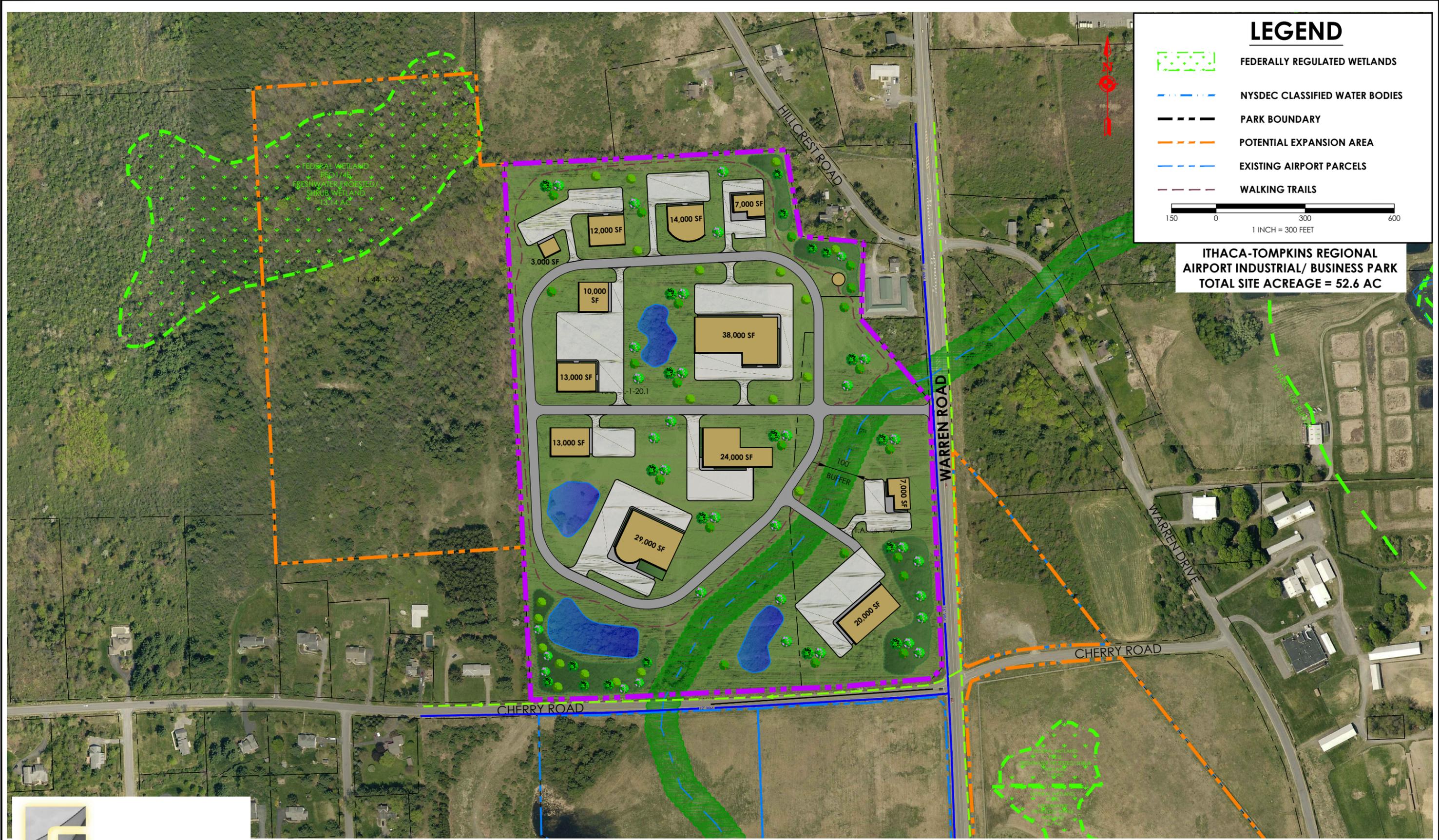
DATE: 03/19/08 JOB No. E08-01
 SCALE: AS SHOWN
 DRAWN BY: TRT SHEET
 CHECKED: DAH **MAP 2**



WARNING: ALTERATIONS TO THIS MAP NOT CONFORMING TO SECTION 7209, SUBDIVISION 2, NEW YORK STATE EDUCATION LAW, ARE PROHIBITED BY LAW. ALL CERTIFICATIONS HEREON ARE VALID FOR THIS MAP AND COPIES THEREOF ONLY IF SAID MAP OR COPIES BEAR THE SEAL OF THE LICENSED PROFESSIONAL ENGINEER WHOSE SIGNATURE APPEARS HEREON.

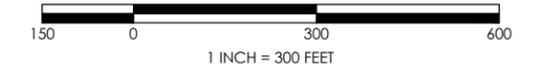
Appendix G

Additional Conceptual Site Plans



LEGEND

-  FEDERALLY REGULATED WETLANDS
-  NYSDEC CLASSIFIED WATER BODIES
-  PARK BOUNDARY
-  POTENTIAL EXPANSION AREA
-  EXISTING AIRPORT PARCELS
-  WALKING TRAILS



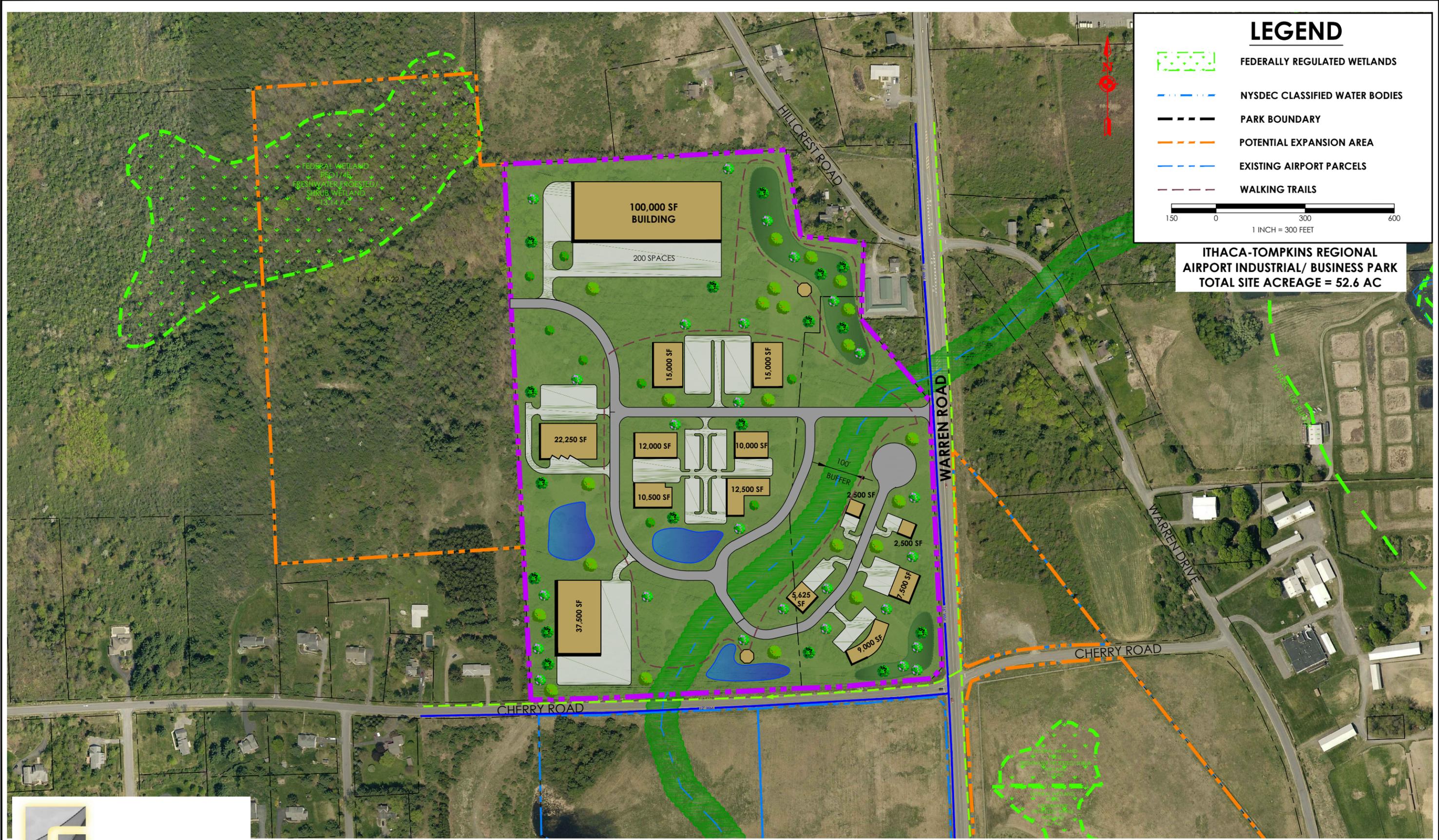
**ITHACA-TOMPKINS REGIONAL
AIRPORT INDUSTRIAL/ BUSINESS PARK
TOTAL SITE ACREAGE = 52.6 AC**



Clark Patterson Lee
DESIGN PROFESSIONALS

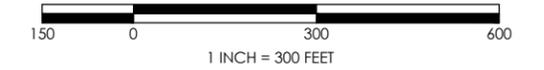
TOMPKINS COUNTY PLANNING DEPARTMENT
FEBRUARY 2016

CONCEPTUAL SITE PLAN: OPTION 1
Scale: 1" = 300'



LEGEND

-  FEDERALLY REGULATED WETLANDS
-  NYSDEC CLASSIFIED WATER BODIES
-  PARK BOUNDARY
-  POTENTIAL EXPANSION AREA
-  EXISTING AIRPORT PARCELS
-  WALKING TRAILS



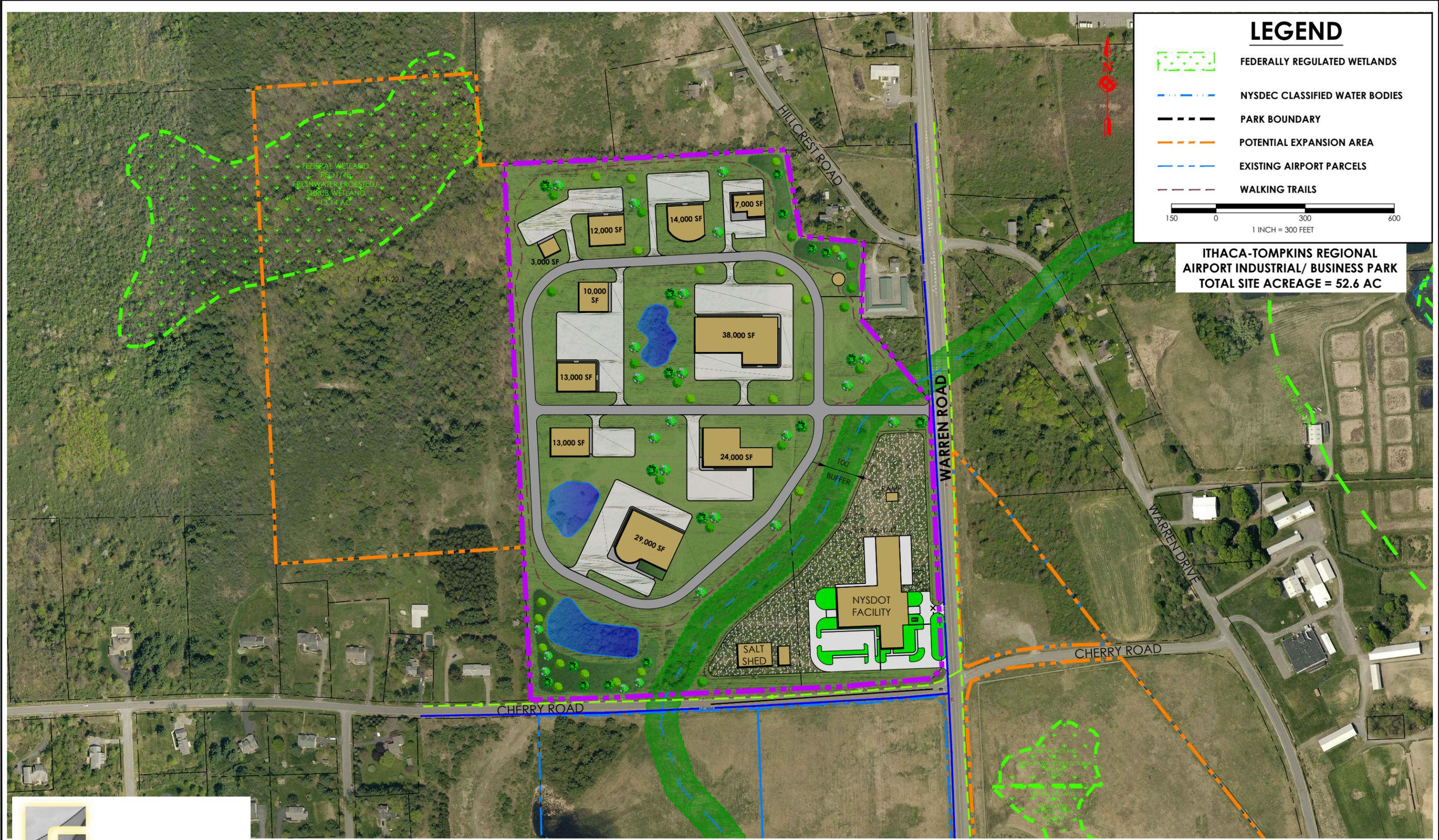
**ITHACA-TOMPKINS REGIONAL
AIRPORT INDUSTRIAL/ BUSINESS PARK
TOTAL SITE ACREAGE = 52.6 AC**



Clark Patterson Lee
DESIGN PROFESSIONALS

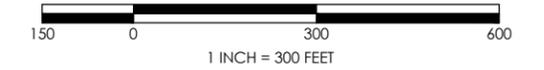
TOMPKINS COUNTY PLANNING DEPARTMENT
FEBRUARY 2016

CONCEPTUAL SITE PLAN: OPTION 2
Scale: 1" = 300'



LEGEND

-  FEDERALLY REGULATED WETLANDS
-  NYSDEC CLASSIFIED WATER BODIES
-  PARK BOUNDARY
-  POTENTIAL EXPANSION AREA
-  EXISTING AIRPORT PARCELS
-  WALKING TRAILS



**ITHACA-TOMPKINS REGIONAL
AIRPORT INDUSTRIAL/ BUSINESS PARK
TOTAL SITE ACREAGE = 52.6 AC**



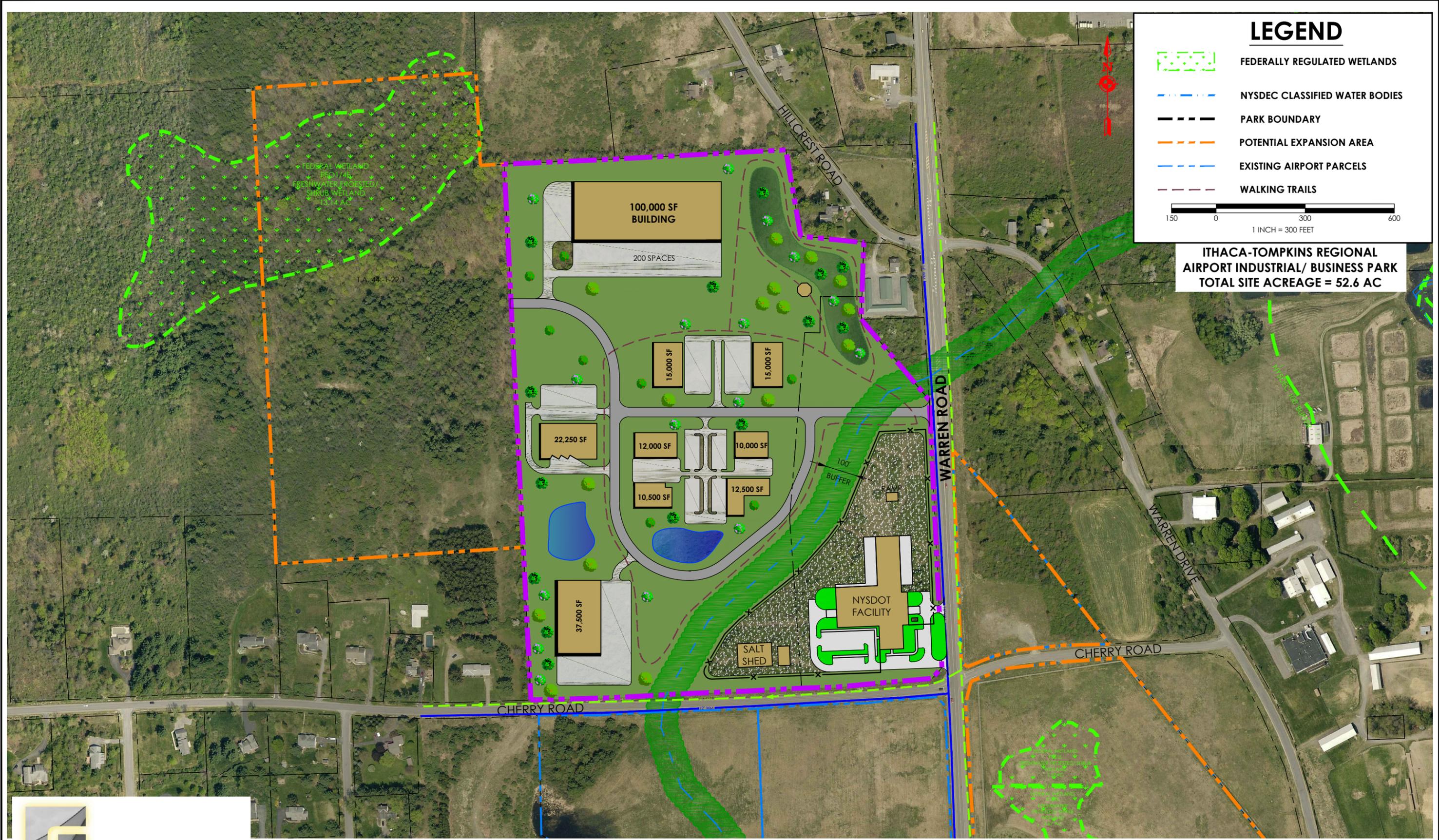
Clark Patterson Lee
DESIGN PROFESSIONALS

TOMPKINS COUNTY PLANNING DEPARTMENT

APRIL 2016

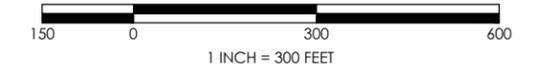
CONCEPTUAL SITE PLAN: OPTION 1

Scale: 1" = 300'



LEGEND

-  FEDERALLY REGULATED WETLANDS
-  NYSDEC CLASSIFIED WATER BODIES
-  PARK BOUNDARY
-  POTENTIAL EXPANSION AREA
-  EXISTING AIRPORT PARCELS
-  WALKING TRAILS



**ITHACA-TOMPKINS REGIONAL
AIRPORT INDUSTRIAL/ BUSINESS PARK
TOTAL SITE ACREAGE = 52.6 AC**



Clark Patterson Lee
DESIGN PROFESSIONALS

TOMPKINS COUNTY PLANNING DEPARTMENT
FEBRUARY 2016

CONCEPTUAL SITE PLAN: OPTION 2
Scale: 1" = 300'