

JEFFREY M. OPETT, P.E.
PROJECT MANAGER

Mr. Opett currently leads our Central New York Civil Engineering and Planning Group on large and complex projects for industry, government and private clients. His experience includes all aspects of Civil Engineering from concept design through permitting and construction. Specific experience includes bridge and highway design, industrial site development, water and sewer infrastructure design and municipal planning projects. An experienced project manager, Mr. Opett has a proven track record to progress large and complex projects to successful completion

Education

Syracuse University, NY/B.S. Civil
Engineering/1991

**Professional
Registration and
Activities**

P.E.-NY
American Society of Civil
Engineers

Tioga County Industrial Devel. Agency, Business Park. Project Manager responsible for the permitting, planning and design services in support of the development of a 200 acre industrial park. Specific tasks included the planning and design of the municipal infrastructure required in support of Best Buy's new 1,000,000 square foot northeast regional distribution facility. Additional tasks also included the preparation of the Environmental Impact Statement, planning and design of roads, water and sewer facilities (a 40,000 GPD wastewater treatment plant as well as potable water production and storage), extensive wetland mitigation and permitting. The project was advanced on a fast track schedule and is expected to be the cornerstone for economic development in Tioga County.

Romano Law Offices, Site Development Plan for 500 Acres. Mr. Opett provided conceptual engineering design services in support of the preliminary design of a 500 acre residential / mixed use development located in Old Forge NY. The project includes the design of water, sewer, storm and roadway improvements in support of the project. Extensive coordination with regulatory agencies including the Adirondack Park Agency was required for this project.

Ianno, Victor, Butters Farm Subdivision. Mr. Opett is the project manager for the concept planning, permitting and design of this 30 lot subdivision in the Town of Skaneateles. The scope of work includes: civil/site engineering, roadway design, water system design, stormwater management, preparation of an EIS and municipal approvals.

City of Watertown, Public Square Streetscape. Mr. Opett is project manager for the reconstruction of the Public Square area of the City of Watertown. Progressed as a federally aided, locally administered project, the scope of work includes: streetscaping, street lighting, curb and sidewalk replacement, road and utility reconstruction as well as the reconfiguration of the traffic flow in the vicinity. The project is located in a dense urban area and a great deal of public involvement and regulatory agency review was required.



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RICHARD N. DEGUIDA, P.E.
ASSOCIATE

Education

Massachusetts Institute of
Technology, MA/M.S. Civil &
Environmental Engineering/1976
Clarkson University, NY/B.S. Civil
& Environmental Engineering/1974

**Professional
Registration and
Activities**

P.E.-NY
American Water Works
Association
Water Environment Association
Central New York Water Works
Conference, Inc.

Mr. DeGuida has more than 26 years of experience in performing and managing water treatment plant, wastewater treatment plant, combined sewer overflow monitoring and modeling, pumping station, water line, sewer line, and water quality monitoring and modeling assessment projects. Projects managed have entailed study/evaluation, final design, bidding, construction administration/observation, and start-up services for a variety of environmental projects ranging in size up to \$22 million. Mr. DeGuida presently manages the Central and Western, N.Y. water/wastewater group and entire CHA Wastewater Group from CHA's Syracuse office. Representative local experience includes:

Tioga County Industrial Devel. Agency, Business Park. Project Manager for the evaluation, regulatory agency approval, final design preparation of plans and specs, bidding, and construction administration of water system improvements (consisting of 2 groundwater wells, disinfection facilities and 400,000 gallon storage tank), 3,000 l.f. of sanitary sewers, and 40,000 gpd sewage treatment facility with surface water discharge to the Susquehanna River.

Town of Owego, Water Pollution Control Plant #2. Project Manager for a Comprehensive Performance Evaluation (CPE) and Composite Correction Program (CCP) of the 2.0 MGD Town of Owego Water Pollution Control Plant #2 consisting of comminutor, parshall flume, 2 primary clarifiers, contact stabilization activated sludge process tanks, 2 secondary clarifiers, chlorine contact tanks, gravity sludge thickener, and anaerobic sludge digesters.

Broome County Dept. of Public Works, Landfill/Airport - Sewer System Design. Project Manager for evaluation, surveying and base mapping, permitting, geotechnical investigation, final design preparation of plans and specs, and bidding of 5 prime construction contracts for 16 miles of gravity sewer and force main, along with 7 sewage pump stations. Cost-effective analysis of alternative consisting of Reverse Osmosis (RO) addition to the effluent end of existing landfill leachate treatment facilities and separate 71,000 gpd sewage treatment plant, with discharge to an intermittent stream, at the Greater Burlington Airport was also performed.

Seneca County Industrial Development Agency, Seneca Army Depot - Sewer System & WWTP #715 Improvements. Project Manager for design of a new water meter and pit to measure water used by the Kids Peace residential treatment facility for Youths in Crisis constructed at the north end of the Seneca Army Depot.

Project Manager for evaluation and final design of improvements needed to reactivate the 0.3 MGD RBC WWTP#715 at the north end of the Seneca Army Depot for use by the Kids Peace residential treatment facility for Youths in Crisis.



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Project Manager for evaluation and final design of necessary improvements to the sewer systems to reduce the excessive I/I tributary to WWTP#715 at the north end of the Seneca Army Depot.

Town of Fayette, Water District No. 2 - Indian Acres Waterline Extension. Project Manager for evaluation, final design, bidding, construction administration/inspection, and start-up of 16,200 feet of 8-inch water main to serve Water District No. 2 (Indian Acres).

Binghamton-Johnson City STP Phase III Improvements. Value engineering of the design of improvements at the 25 MGD Binghamton - Johnson City Joint STP to include Biological Aerated Filtration (BAF) treatment units to reduce carbonaceous and nitrogenous BOD loadings to the Susquehanna River; estimated construction cost is about \$30 million.



WALTER L. KALINA, A.I.C.P.
SENIOR PLANNER/LANDSCAPE ARCHITECT

Mr. Kalina has more than 23 years of professional planning and project management experience with public and private sector clients throughout the United States. His areas of expertise include land use planning, community planning, site design, environmental impact assessment and mitigation, regulatory compliance, recreation planning and design, urban design and public participation. Prior to joining CHA Mr. Kalina served as Manager of Design and Principal Planner with McKenna Associates, Inc. in Northville, Michigan. Project experience includes:

Education

Syracuse University, NY/B.A.
Geography/1980
Syracuse University, NY/M.A.
Public Administration/1998
SUNY College of Environmental
Science/Forestry, NY/M.A.
Landscape Architecture/1998

Tioga County Industrial Devel. Agency, Business Park. Managed the SEQR review process, including a Full Environmental Assessment and Environmental Impact Statements for the proposed construction of a 1.6 million S.F. regional distribution facility in Nichols, Tioga County. Issues included cultural resources, natural resources, transportation, infrastructure and land use impacts and mitigation.

**Professional
Registration and
Activities**

American Institute of Certified
Planners
Certified Playground Safety
Inspector
American Planning Association
National Recreation and Park
Association
National Playground Safety
Institute

Romano Law Offices, Site Development Plan for 500 Acres. Project Manager responsible for developing a land use and site development concept for a proposed mixed-use residential and commercial project within the Adirondack Park of New York State. The project included a design charrette with state and local agencies, the purpose of which was to develop a concept consistent with site opportunities and constraints including land use development regulations under the jurisdiction of the Adirondack Park Agency. The project required extensive GIS mapping of site conditions and natural constraints to development.

Town of Cortlandville, Route 281/13 Transportation & Land Use Plan. Project Manager to prepare a land use and aquifer protection plan for the Route 281/13 highway corridor in Cortlandville. The plan recommends future land use and zoning changes consistent with aquifer protection of the Town's sole source aquifer. The plan also addresses transportation, utility, infrastructure, access management and design issues along the six-mile corridor.

Gannett Fleming, Inc., Comprehensive Plan Bradford County, Pennsylvania. Project Manager responsible for the CHA component of the project team preparing a comprehensive plan for Bradford County, PA. Sections of the plan developed by CHA included transportation, community services and facilities, natural features and environmental conditions, and future land use. The Plan is consistent with the requirements of the Commonwealth of Pennsylvania and included an extensive community outreach process.

City of Syracuse Dept. of Community & Econ. Devel., Comprehensive Plan. Senior Planner responsible for the economic development (work) component of the comprehensive planning process. Responsibilities included coordination with the Plan's Advisory Committee members, City staff and other project stakeholders including various public agencies involved in economic development and the general public. The planning process included extensive public outreach including meetings, focus group discussions on key issues and working group subcommittees.



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CHRISTOPHER M. MIRANDA, P.E.
ASSOCIATE

Education

Georgia Institute of Technology,
GA/B.A. Industrial
Engineering/1993

**Professional
Registration and
Activities**

P.E.-GA

Mr. Miranda has more than twelve years of experience in the design of electric, water, and sewerage rates. He has prepared studies for electric cooperatives and municipalities throughout the United States. His utility rate experience includes innovative rate designs, unbundled allocated cost-of-service studies, and load profile studies. He has filed testimony before the Indiana Utility Regulatory Commission, Kentucky Public Service Commission and the Virginia State Corporation Commission and the West Virginia Public Service Commission. He assisted with filings before the Oklahoma Corporation commission and the Georgia Public Service Commission.

Rodecker, Robert R., Testimony in WVAC Rate Case. Represented municipal clients of the law firm in the American Water- West Virginia rate case. This project included analyzing the rate filing both overall and specifically the impact it would have on the municipal systems. Particular emphasis was placed on a proposed standby tariff that was included as part of the filing. The support provided for the municipal systems included interrogatories, analyses and filed testimony before the West Virginia PSC.

Town of Dix, Services to Develop Water/Sewer Rates. Developed a cost-to-serve analysis to determine an appropriate basis for purchasing treated water from the Village of Watkins Glen. Developed a detailed analysis of the cost to provided water and sewer service to the Town of Dix and recommended rates both for service from the Village to the Town, and for the Town to charge its customers.

City of New Martinsville, Power Supply Consulting Services. Developed load forecast models for two municipal systems and one cooperative. The forecasts were used to solicit bids from power suppliers to provide load requirements for these utilities. Made recommendations on which supplier to use and provided support in finalizing the power supply contract.

Holmes-Wayne Electric Co-operative, Inc., Master Service Agreement. Unbundled Cost-of-Service and Retail Rate Study for Holmes-Wayne ECI, Millersburg, Ohio. Created a complete unbundled cost-of-service, retail rate, and five-year financial forecast study. The financial forecast included a large increase in capital spending. This impact was explained to the management team and the Board of Directors. Provided assistance in determining an appropriate course of action and developed sensitivity analyses for a wide range of options. After the revenue increase was determined, used the results of the cost-of-service study to adjust the various rate classifications appropriately. The rates were also adjusted to send appropriate pricing signals to the end-use customers and better position the utility for a possible competitive power supply market in the future. Also updated and redesigned the Wholesale Power Cost Adjustment to reflect current costs and lessen the monthly fluctuations and impact on customer bills.



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CHRISTIAN A. SCALZA, P.E.
PROJECT ENGINEER

Mr. Scalza has served as Project Engineer in a number of capacities in the past few years. He has been the lead designer on several types of water and wastewater engineering projects, both municipal and private, which included preparation of contract drawings, specifications, and cost estimates. He has been involved in all stages of project development from proposals to design work and also contract administration, construction inspection, and system start-up. He also has experience in report writing, transportation engineering, state environmental quality reviews, and hydraulic modeling systems. Representative project experience includes:

Education

SUNY Buffalo, NY/B.S. Civil
Engineering/1995
SUNY Cortland, NY/B.S.
Physics/1995

**Professional
Registration and
Activities**

P.E.-NY
American Water Works
Association
American Public Works
Association

Tioga County Industrial Devel. Agency, Business Park. Project Engineer responsible for the engineering reports, formation of water district, design, bidding, and contract administration for a new water system to serve a proposed warehouse distribution facility. Water system included two groundwater wells, 9,000 l.f. of ductile iron pipe, hydrants, valves, 400,000 gallon ground-level water storage tank, chlorination facilities, and telemetry controls. Water from the system is used to provide domestic and fire protection for the warehouse and surrounding area.

City of Syracuse Dept. of Water, General Water Eng. Term Agreement. Project Engineer responsible for maintaining a term agreement for general engineering services with the Syracuse Water Department. Work orders through the term agreement included watermain replacement project, booster pump station project, slope re-stabilization project, and emergency watermain replacement under railroad tracks.

Broome County Dept. of Public Works, Waterline Extension. Project Engineer responsible for the design of a new water system to serve a county airport and landfill. Project phases included preparation of an engineering report to evaluate alternatives, design of construction documents, bidding services, contract administration and construction inspection. Project consisted of 12 miles of ductile iron pipe and high-density polyethylene watermain, two ground-level water storage tank, one elevated water storage tank, two booster pump stations, two chlorine facilities, electrical work, sitework, and telemetry.

Project Engineer responsible for the design of a new water system to serve a county airport and landfill. Project included hydraulic modeling of three alternatives to ascertain the most cost-effective alternative. Modeling included 12 miles of watermain, three water storage tanks, two booster pump stations, two rechlorination facilities, and electrical/telemetry controls.



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Town of Fayette, Water District No. 2 - Indian Acres Waterline Extension. Project Engineer and lead design of 18,000 linear feet of 8-inch ductile iron water main in the Indian Acres Water District in the Town of Fayette. A public water distribution system was need due to the fact that many town residents had contaminated private wells. Project includes: engineering report, water main design, coordination with local, state and federal agencies, bidding assistance, contract administration and construction inspection (resident construction inspector).

Broome County Dept. of Public Works, Landfill/Airport - Sewer System Design. Project Engineer responsible for the preparation of an engineering report used to evaluate alternatives for the conveyance of sanitary sewage and landfill leachate from a county landfill, airport, and surrounding corridor. Project included evaluation of four alternatives (three sewer alternatives and one on-site treatment alternative). Report included hydraulic sewer modeling, alternative presentation and evaluation, construction cost estimates, and coordination with the county health department and New York State Department of Environmental Conservation.

Village of Elbridge, Valley Drive Watermain Replacement & Extension. Project Engineer and lead designer of a 3,000 linear foot watermain extension. The project replaced an existing watermain as well as extended public water to residents previously served by an aging private water system. Project includes: engineering report, design, health department coordination, contract administration & construction inspection.

Town of New Hartford, Applewood Pump Station Emergency Replacement. Project Engineer and lead designer for the emergency replacement of an aging sanitary sewer pump station. The new pump station included pumps, wet-well, piping, manholes, electrical & telemetry. The station was designed to handle infiltration & inflow from the sewer system. Project includes: engineering report, design, contract administration and construction inspection.

Town of Milo, Sewer District Nos. 1-2. Project engineer and lead designer responsible for design of a six mile low pressure sewer system. The purpose of the project was to abandon the aging private septic systems near Keuka Lake, which were harmful to the lake's water quality, and provide a public sewer system for the residents. The construction includes six miles of high density polyethylene pipe (directional drilled), 375 grinder pump stations, chemical feed systems, odor control system, pre-packaged pump station, and connection to the Penn Yan sewer system. The project includes: engineering report, design, bidding, and contract administration.

Village of Marathon, Emergency Pump Station Repairs. Construction inspector for the repair of an existing sanitary sewage pump station and replacement of a grinder pump station. Project includes inspection of a new grinder pump station, replacement of sewage pumps and valves, rehabilitation of the station structure, electrical, and telemetry.



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JASON R. DESHAIES
PLANNER

Mr. Deshaies has worked primarily with site analysis, land use planning, and Geographic Information System (GIS) related projects. He has created numerous graphical products for reports, presentations, and visual analysis. He has experience with demographic, real property, traffic, and environmental data, as well as digital orthophotos. Representative project experience includes:

Education

SUNY Plattsburgh, NY/B.S.
Environmental Science/2002

Romano Law Offices, Site Development Plan for 500 Acres. Responsible for the generation and analysis of natural constraints GIS mapping for 500 acres in the Adirondack Park. Site analysis resulted in the selection of a primary location for a proposed mixed-use residential and commercial project. The project concept was developed consistent with site opportunities and constraints including Adirondack Park Agency land use development regulations.

Village of Elbridge, Main Street Corridor Plan. Planner responsible for the preparation of a GIS-based building footprint and the coordination of information in an UTM coordinate system using ArcView 3.2. The building and coordinate information was part of an application by the Village to the State to be included in the Empire Zone Program boundary revision by Onondaga County. The GIS mapping included aerial photo illustrations of buildings within the Village proposed for inclusion in the County's Empire Zone that are in need of economic redevelopment tax incentives that are provided by the State.

Town of Ancram, Scenic Corridor Overlay Zone. Planner responsible for the development of newly revised zoning map and the Town of Ancram. This required the manipulation of USGS maps and data from New York State Department of Transportation into Arcview format.

Town of Cortlandville, Route 281/13 Transportation & Land Use Plan. Mr. Deshaies generated GIS graphics for various planning issues. Primary and principal aquifer areas as well as municipal wells and protection zones were mapped to illustrate aquifer protection areas. Created existing and future land use maps for planning purposes.

Syracuse Metropolitan Transportation Council, University Hill Transportation Plan. Planner responsible for generation of existing conditions GIS mapping for the University Hill study area. Mapping included various demographic categories, existing traffic conditions, existing mass transit routes, bicycle/pedestrian routes, parking facilities, land use assessment, zoning, origin/destination of University Hill employees, and vehicle access. Also, involved in the public participation process including public meetings and field surveys.



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**MICHAEL D. ALEXANDER
PLANNER**

Education

Cornell University
Masters in Regional Planning
College of Architecture, Art, and Planning
May 2003

Cornell University
Urban and Regional Studies
Bachelor of Science Honors
May 2002

Onondaga Community College
Fire Protection Technology
Associates of Applied Science
May 1999

Mr. Alexander graduated from Cornell University in May 2003 with a Masters in Regional Planning. In addition, Mr. Alexander received his Bachelor of Science from Cornell, and an Associates Degree from Onondaga Community College. Prior to Clough, Harbour & Associates LLP, he worked for the Syracuse Planning Department where he helped to create a neighborhood revitalization plan. Mr. Alexander also worked for two nonprofit housing/community development agencies, where he created a land use plan, and helped develop a home equity protection program. Related coursework includes a Corridor study in Rochester, NY. Areas of expertise/education include: environmental planning, land use planning, community planning, and public participation.

Comprehensive Plan, City of Syracuse, NY. As project planner, involvement requires the preparation of a strategy and policy document to guide future land use decisions Citywide. The project includes an extensive public outreach program with stakeholder workshops, working committees and focus group discussions relative to issues and opportunities in strategic planning areas throughout the City.

Comprehensive Plan, Village of Liverpool, NY. Planner for the preparation of a Village Comprehensive Plan based upon smart growth and New Urbanism planning principles. The project requires extensive public outreach with local merchants, property owners and stakeholders in the Village center where high volumes of traffic and business development are primary planning issues.

Home Equity Insurance Program – Neighborhood Reinvestment Corporation Ithaca, NY. The study focused on Syracuse housing sales in an effort to create a program that would allow homeowners to purchase insurance designed to offset potential financial loss associated with a future home sale. Responsibilities included mapping the data using ArcView GIS Software to determine housing trends

Genesee River Corridor Study – Cornell University, City of Rochester Sector 4 & 5, Rochester, NY. As a researcher, responsibilities included analyzing commercial and neighborhood corridors along Rochester's Genesee River. The final study identified residential and commercial areas that are in a state of disrepair, summarized data from surveys and interviews, and suggested priority areas for future development and investment.



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Appendix B

Opportunities & Constraints Mapping

Development Constraints

Tioga County

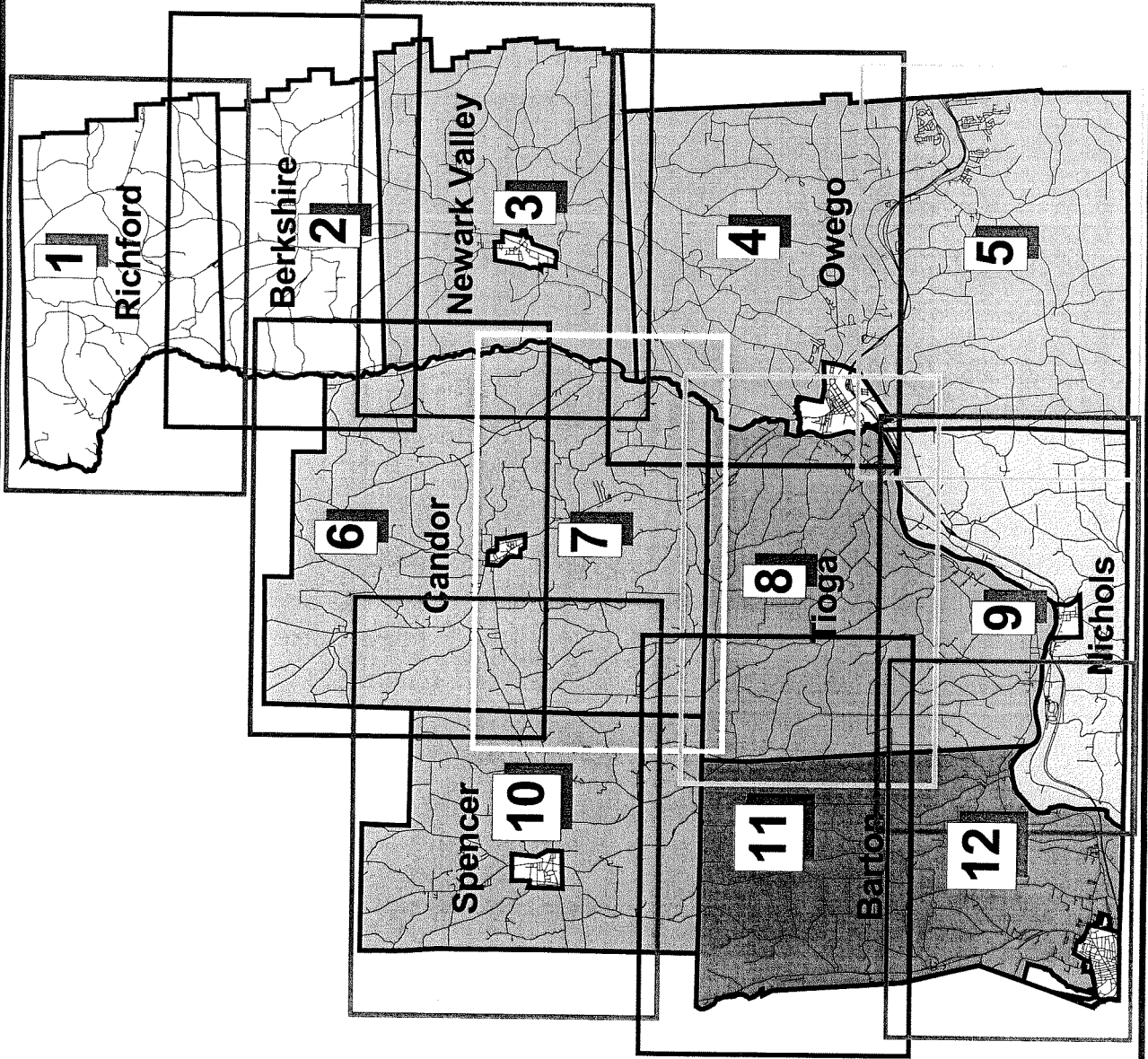
INDEX MAP



Source: Tioga County Planning (2003).
Disclaimer: Map is intended for planning purposes only.
Random data inaccuracies may occur. No warranties
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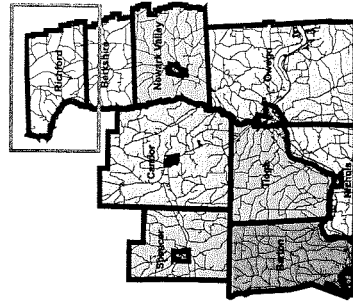


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ENGINEERS, SURVEYORS, PLANNERS
& ARCHITECTS



Development Constraints

Town of Richford



Tioga County



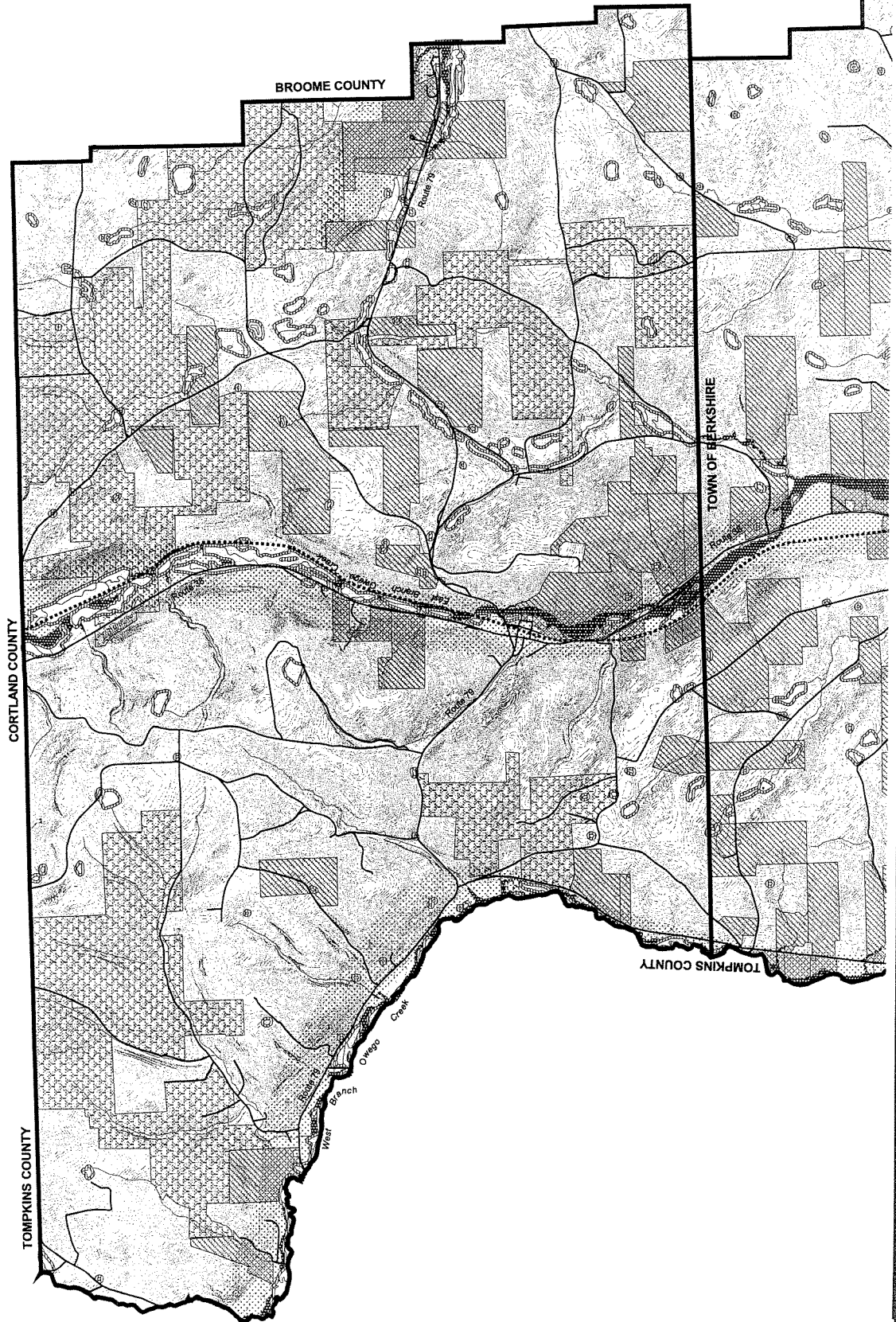
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- Municipal Boundaries
- Railroad
- Roads
- Wetlands
- 100' Wetland Buffer
- Rivers
- Public Land
- Agricultural Districts
- 100 Year Floodplain
- Aquifers
- Contours
- Tioga County

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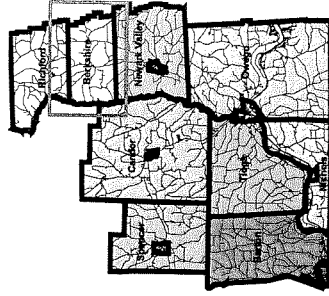


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 ENGINEERS, ARCHITECTS & LANDSCAPE ARCHITECTS



Development Constraints

Town of Berkshire



Tioga County



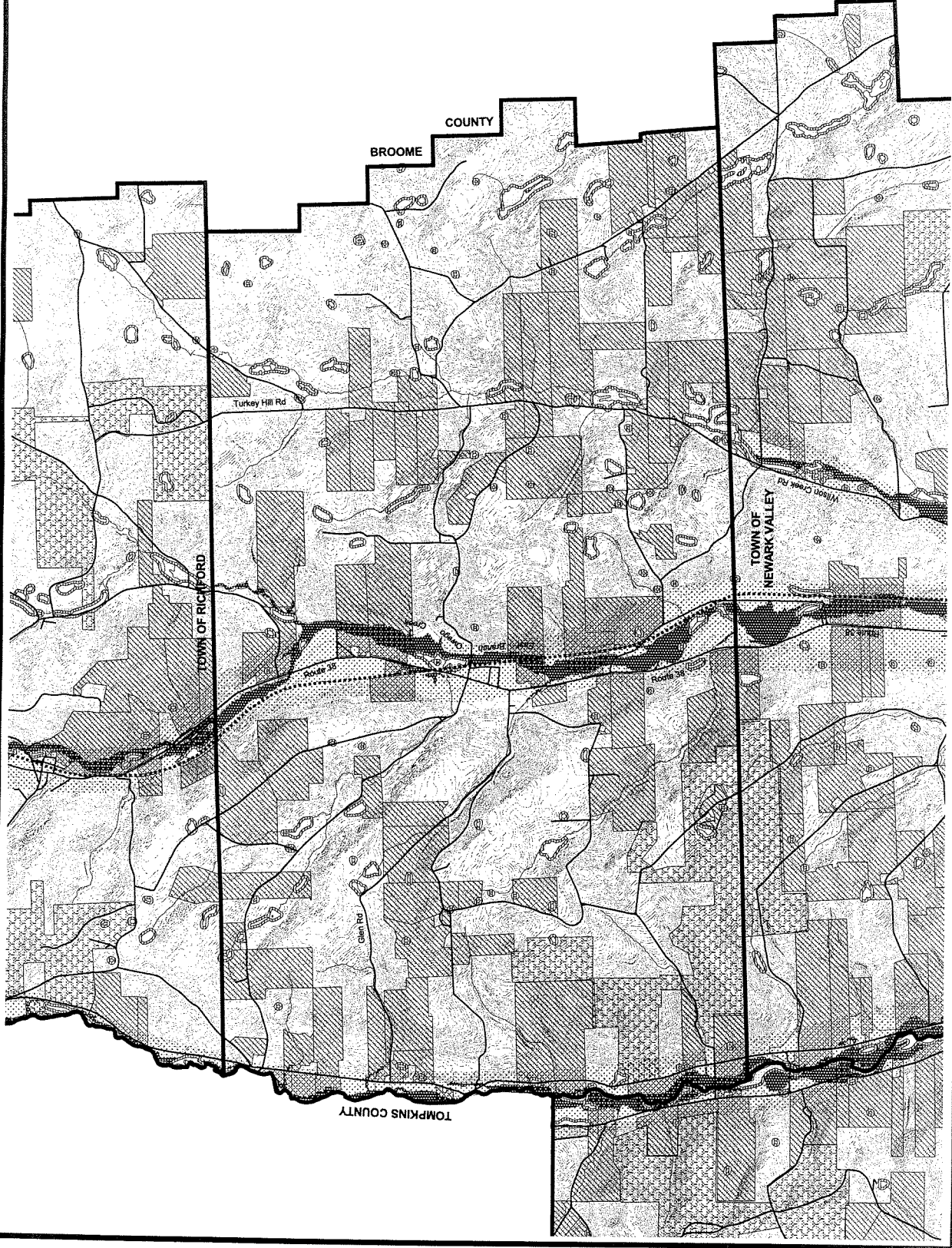
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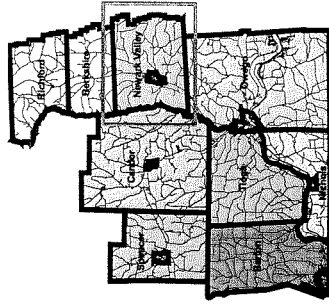


CFA
CLOUGH, HARBOUR & ASSOCIATES LLP
ENGINEERS & LANDSCAPE ARCHITECTS



Development Constraints

Town of Newark Valley



Tioga County



3

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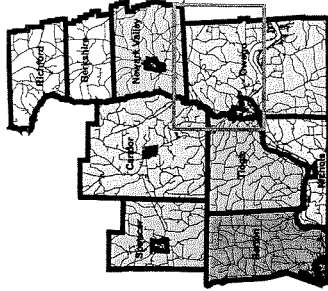


CLOUGH, HARBOUR & ASSOCIATES, LLP
 ENGINEERS, PLANNERS, ARCHITECTS



Development Constraints

Town of Owego



Tioga County



4

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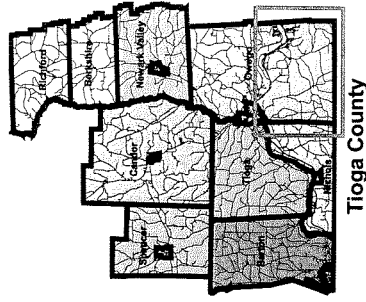


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CLOUGH, HARBOUR & ASSOCIATES, LLP
 ARCHITECTS & LANDSCAPE ARCHITECTS



Development Constraints

Town of Owego



Tioga County



5

-  Municipal Boundaries
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CLOUGH, HARBOUR & ASSOCIATES LLP
 ENGINEERS, SURVEYORS, PLANNERS
 100 STATE STREET

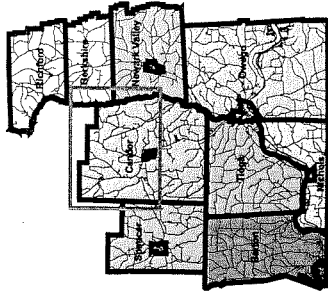
BROOME COUNTY



STATE OF PENNSYLVANIA

Development Constraints

Town of Candor



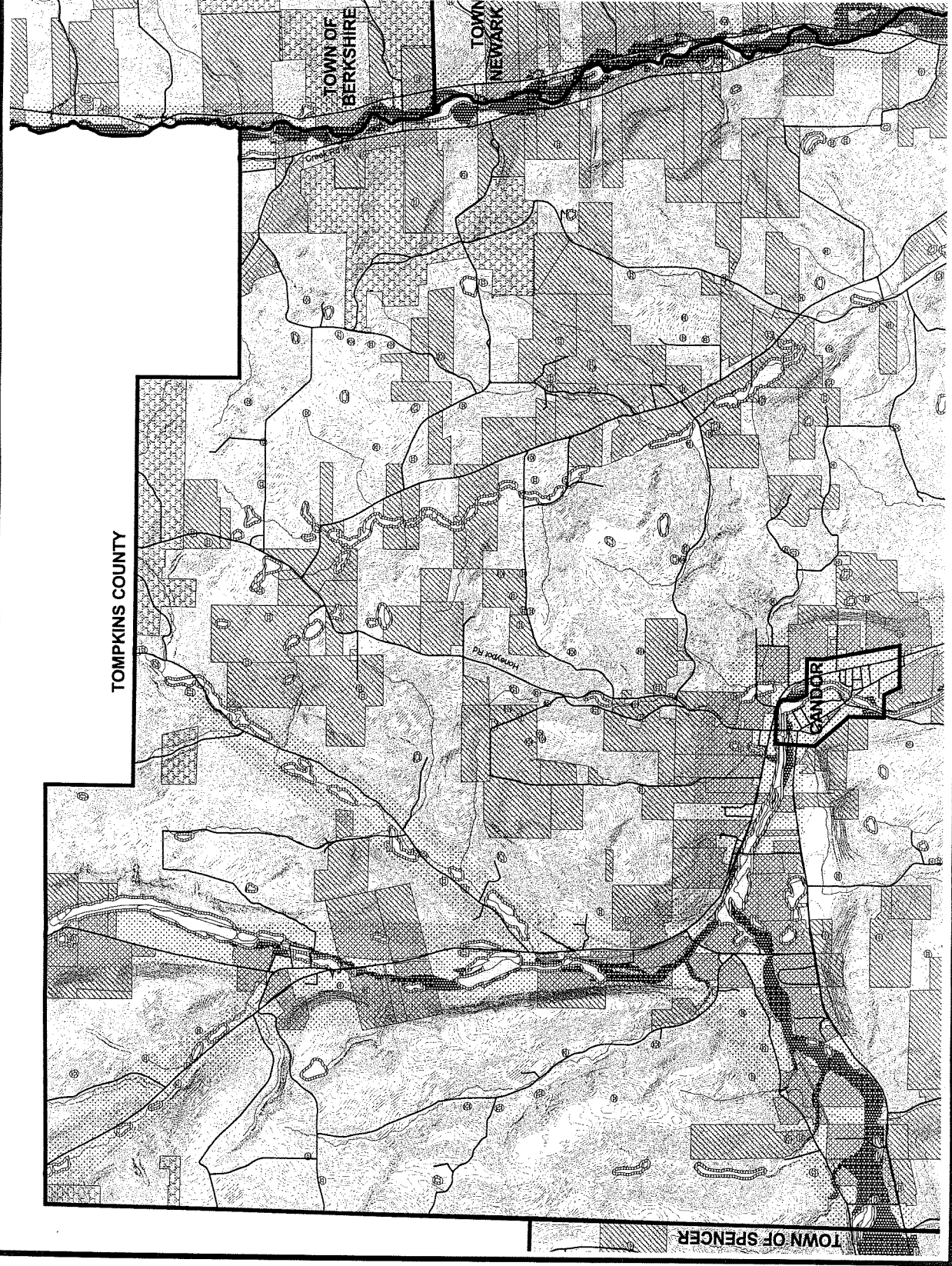
Tioga County



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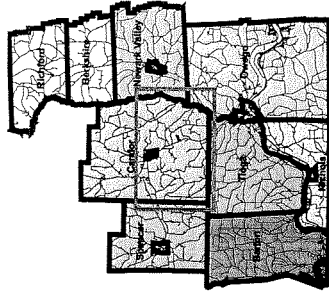
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Development Constraints













Town of Candor



Tioga County



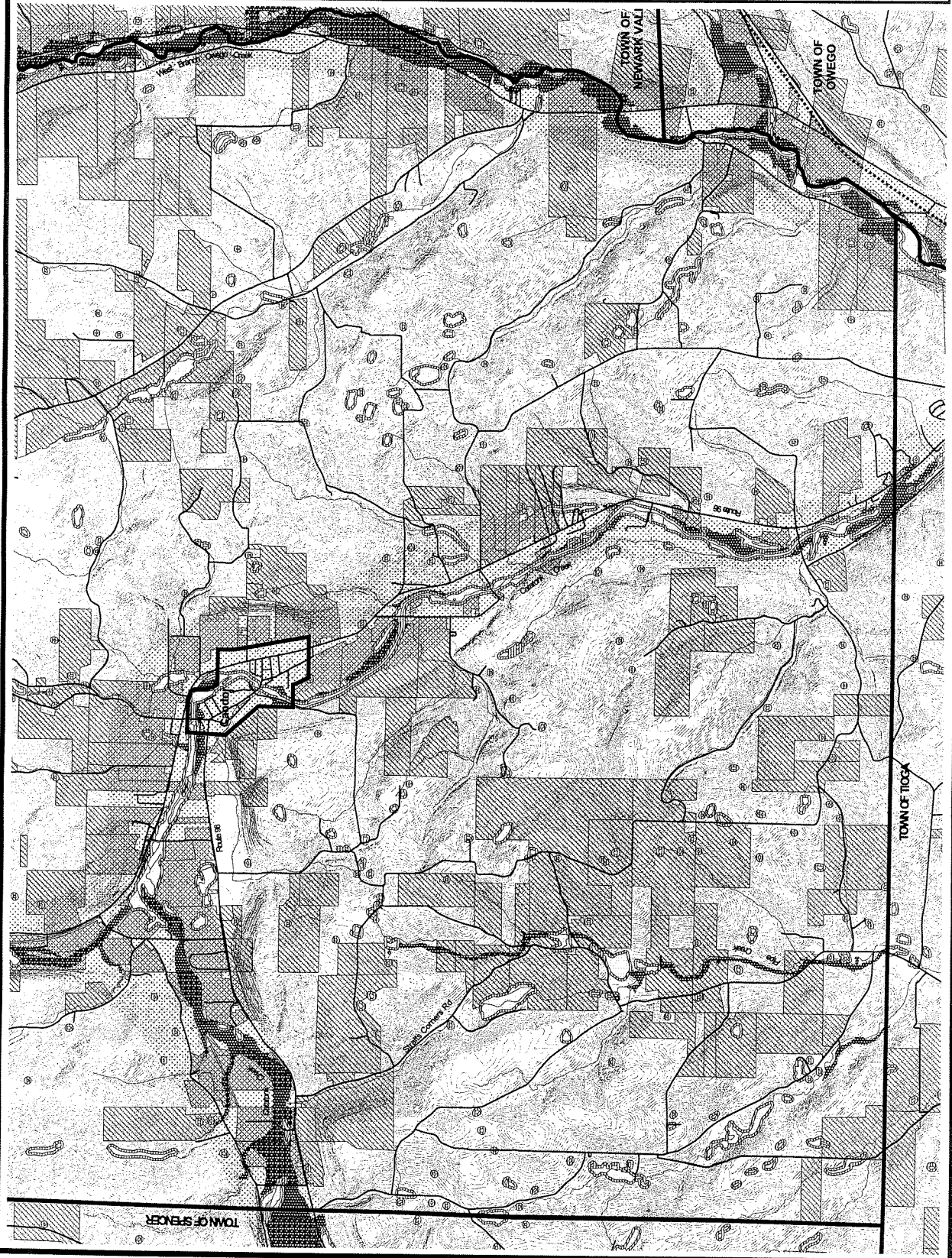
7

-  Municipal Boundaries
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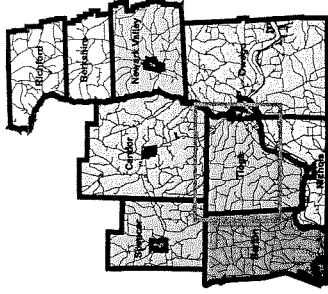


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CLOUGH, HARBOUR & ASSOCIATES, LLP
 ARCHITECTS, PLANNERS & LANDSCAPE ARCHITECTS



Development Constraints

Town of Tioga



Tioga County



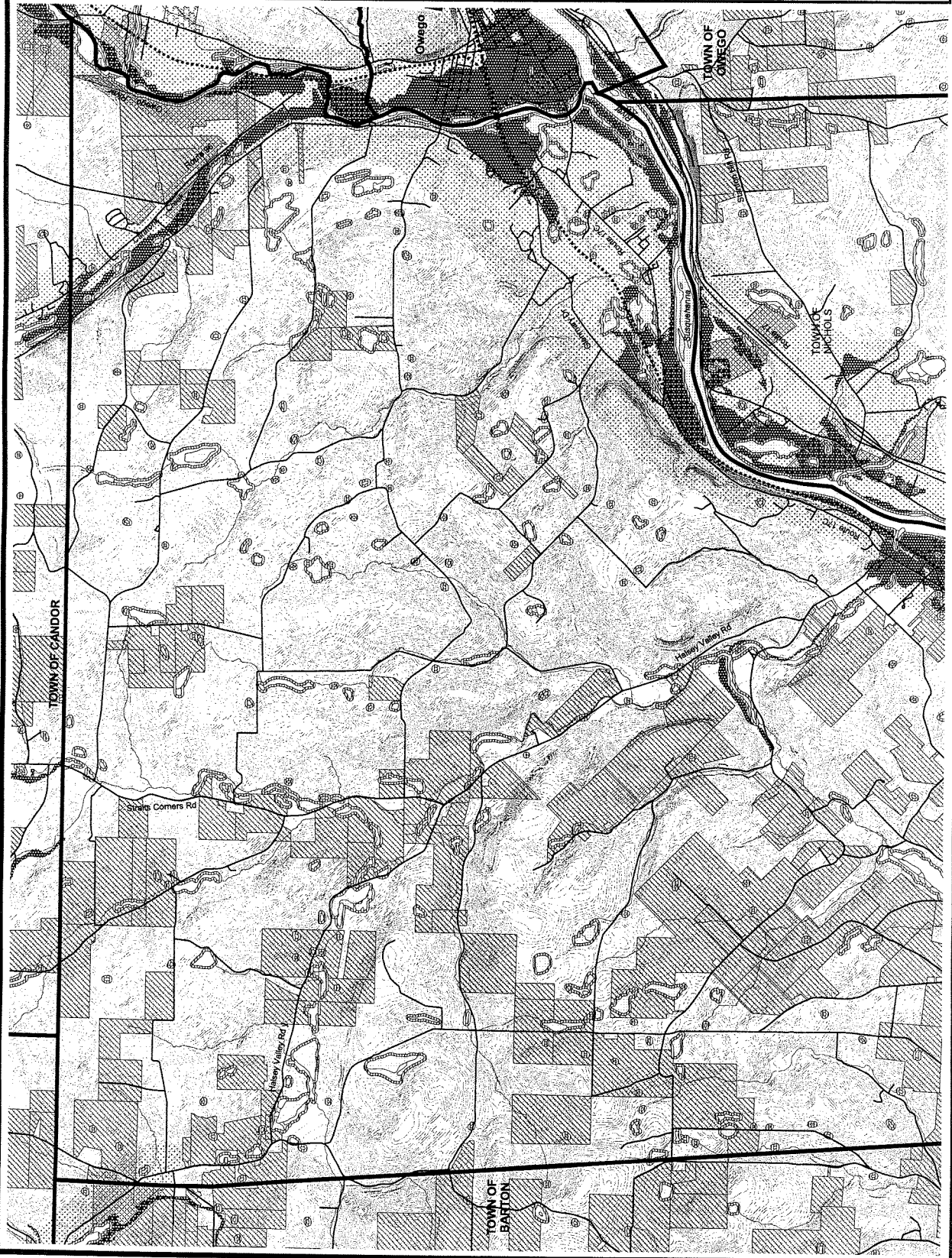
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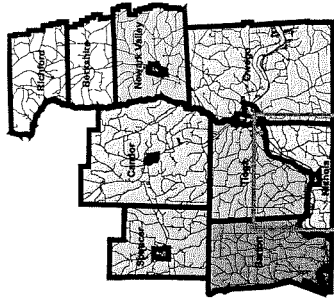


CLOUGH, HARBOUR & ASSOCIATES, LLP
 CONSULTING ENGINEERS & LANDSCAPE ARCHITECTS



Development Constraints

Town of Nichols



Tioga County



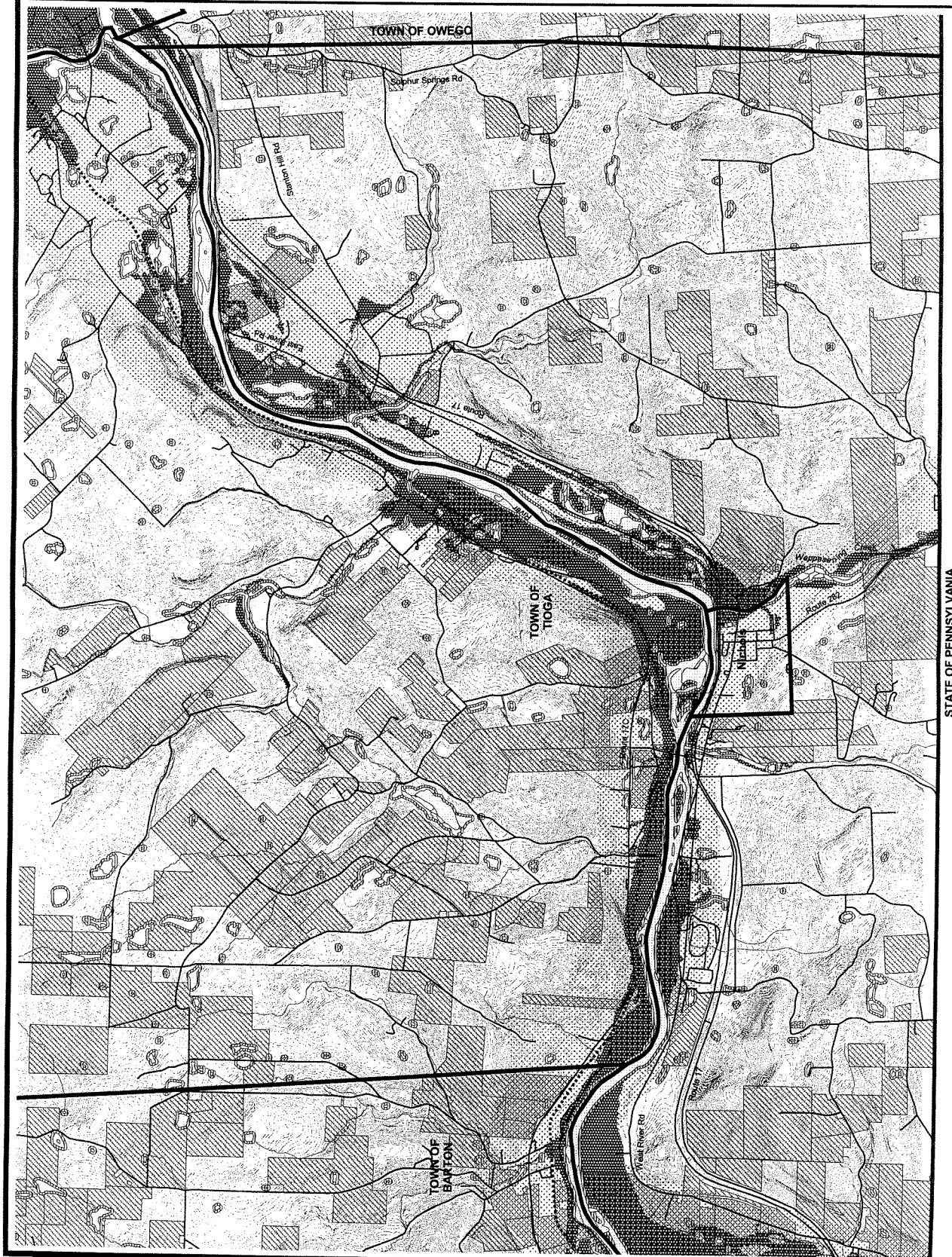
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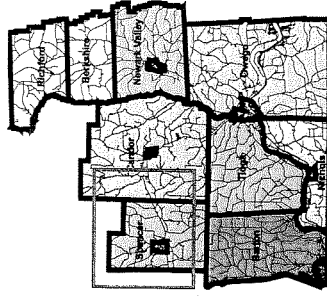
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STATE OF PENNSYLVANIA

Development Constraints

Town of Spencer



Tioga County



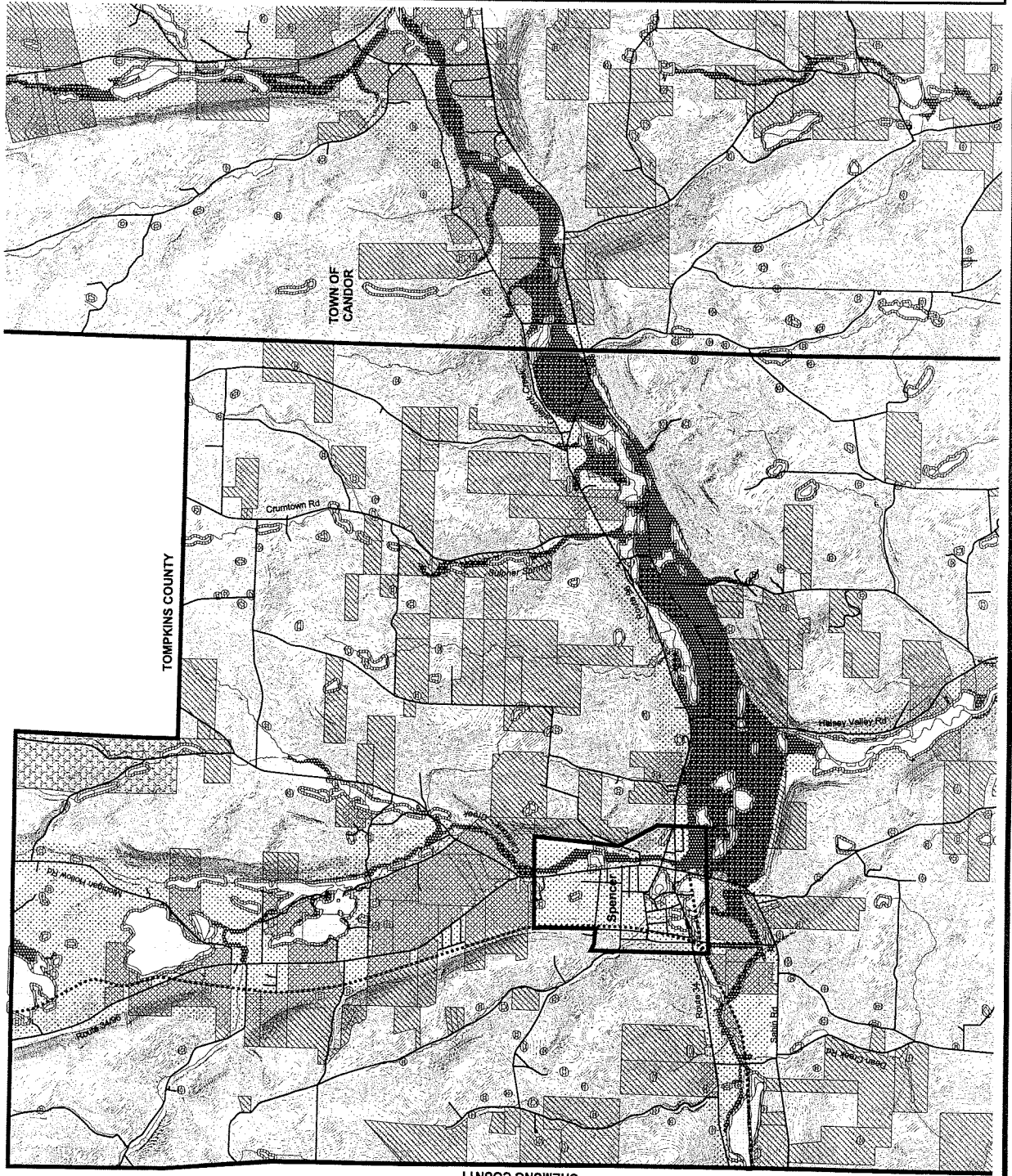
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- Municipal Boundaries
- Railroad
- Roads
- Wetlands
- 100' Wetland Buffer
- Rivers
- Public Land
- Agricultural Districts
- 100 Year Floodplain
- Aquifers
- Contours
- Tioga County

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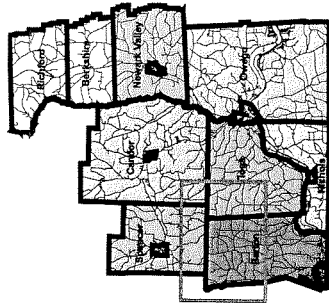
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CHEMUNG COUNTY













Development Constraints

Town of Barton



Tioga County

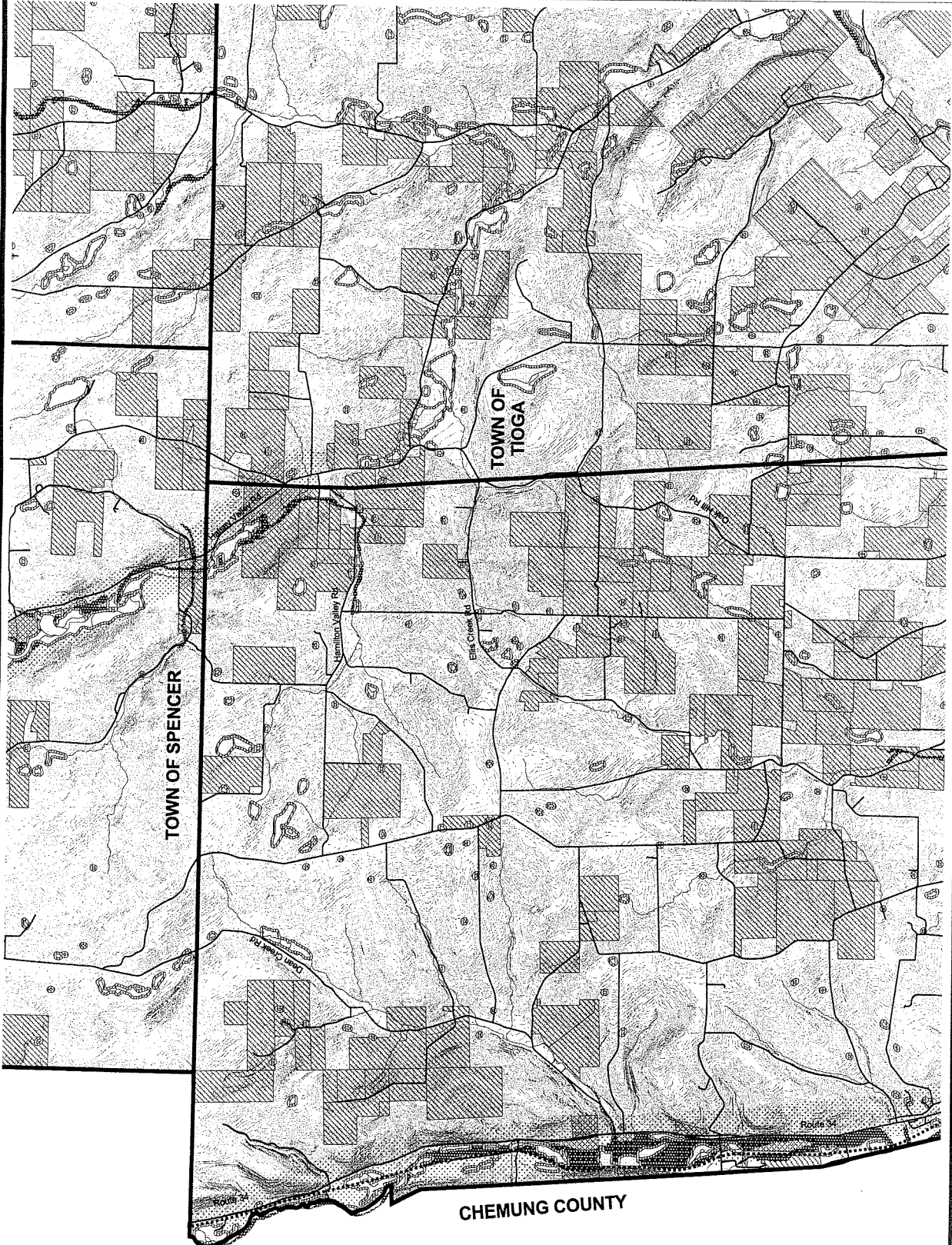


-  Municipal Boundaries
-  Railroad
-  Roads
-  Wetlands
-  100' Wetland Buffer
-  Rivers
-  Public Land
-  Agricultural Districts
-  100 Year Floodplain
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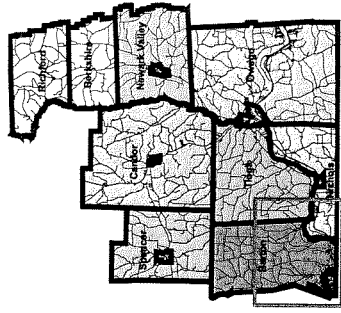


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 WWW.CHA-PA.COM



Development Constraints

Town of Barton



Tioga County



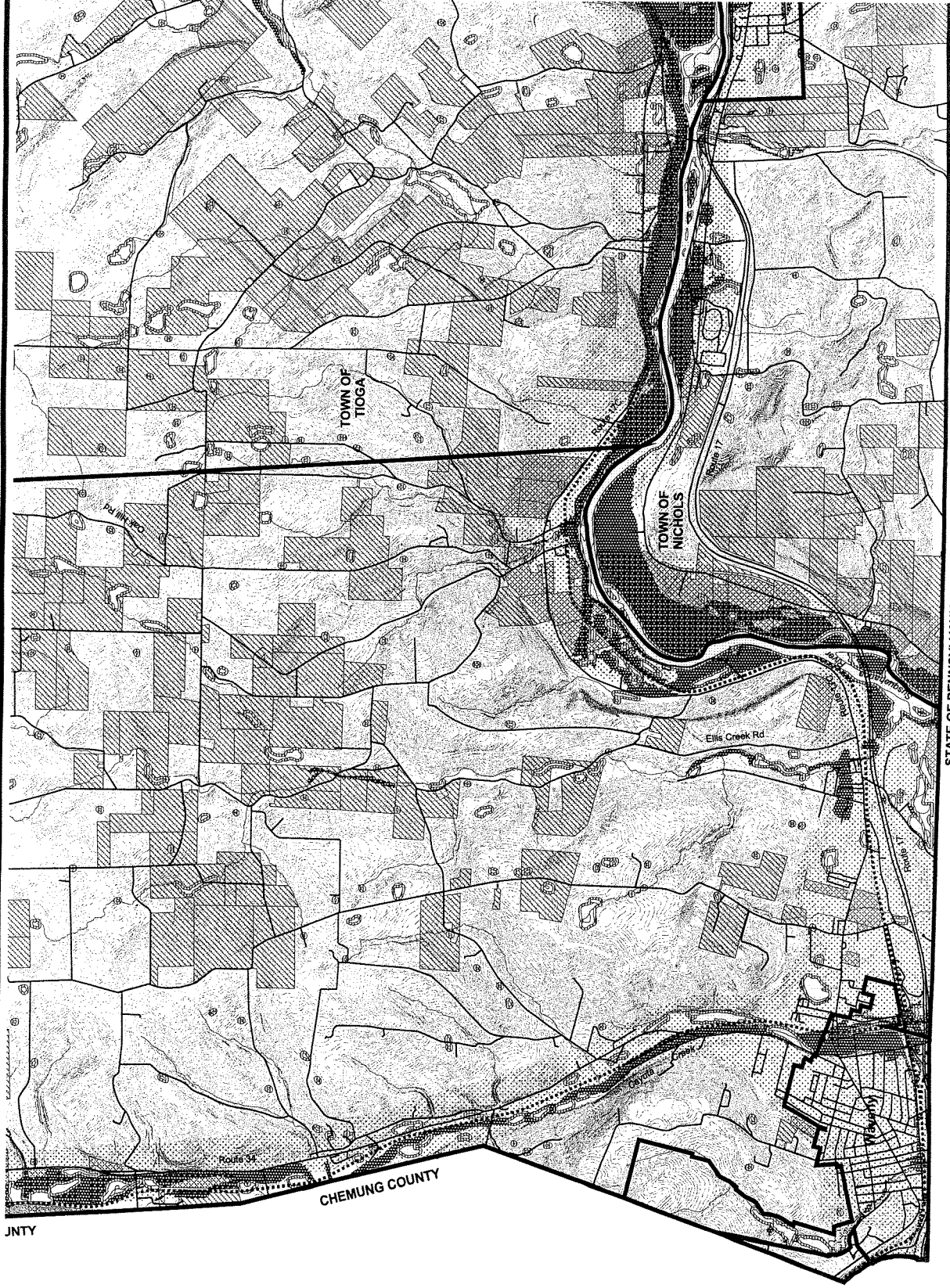
12

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- Contours
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JNTY

CHEMUNG COUNTY

STATE OF PENNSYLVANIA

Development Opportunities

Tioga County

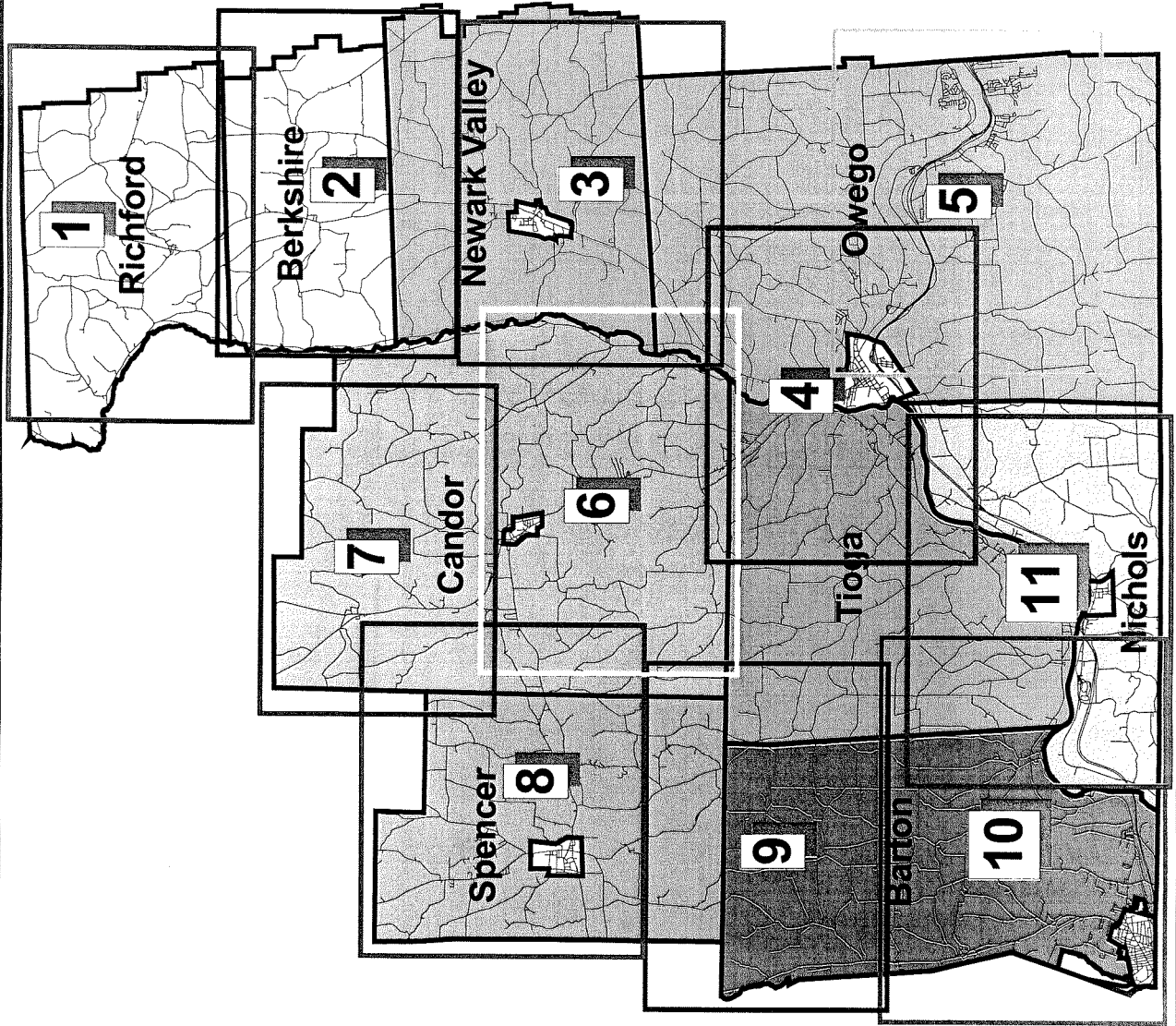
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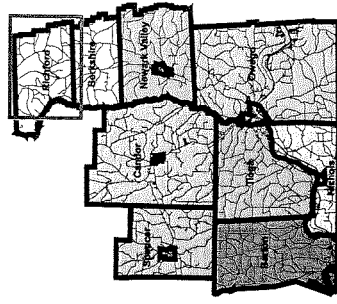


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Development Opportunities

Town of Richford



Tioga County



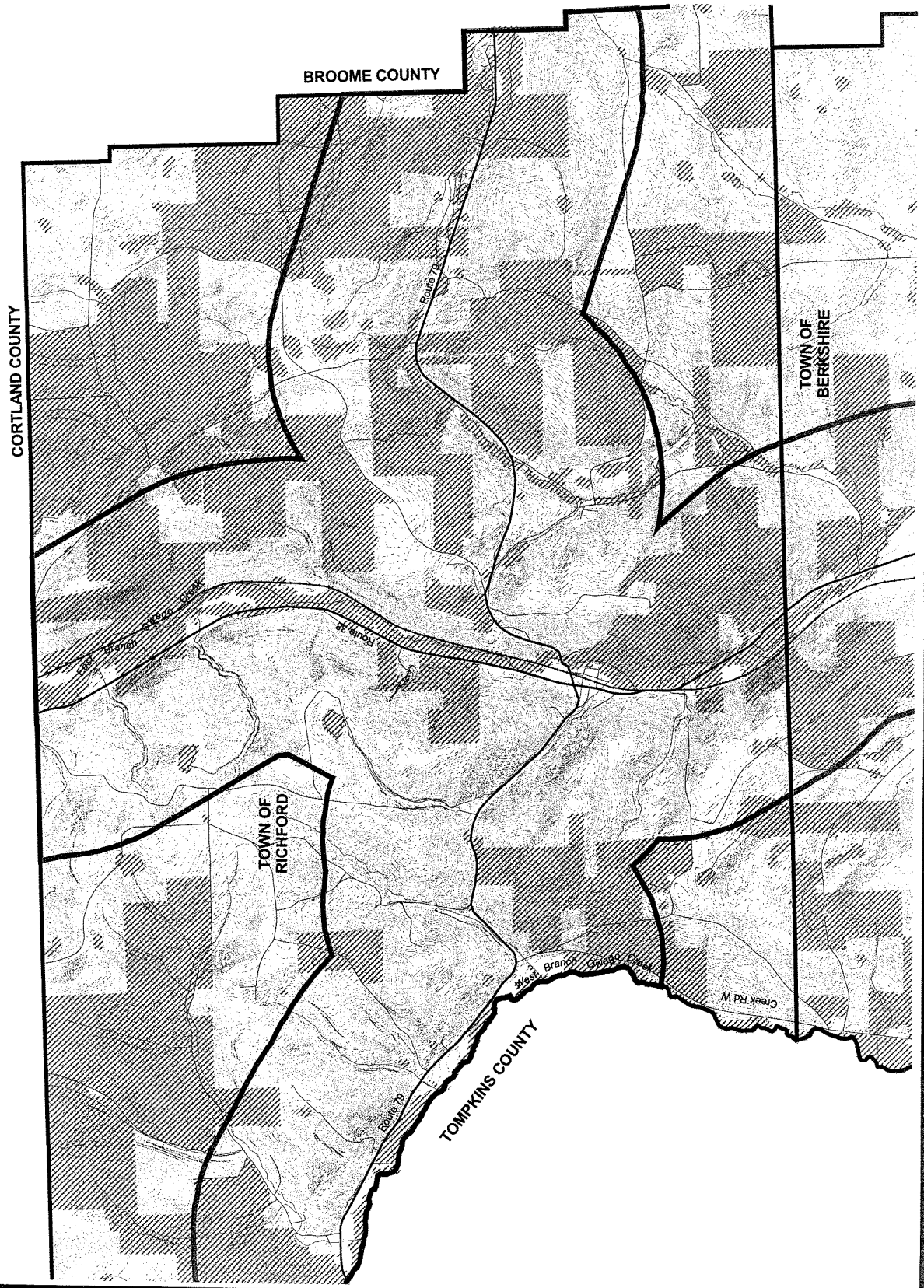
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- Municipal Boundaries
- Area of Interest
- Water Services
- Sanitary Services
- Major Routes
- Railroad
- Roads
- Rivers
- Empire Zone
- Water District
- Development Constraints
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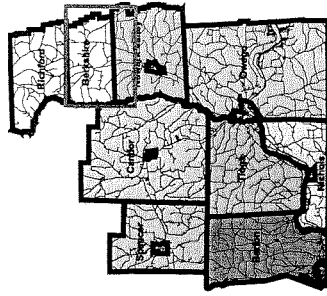


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Development Opportunities

Town of Berkshire



Tioga County

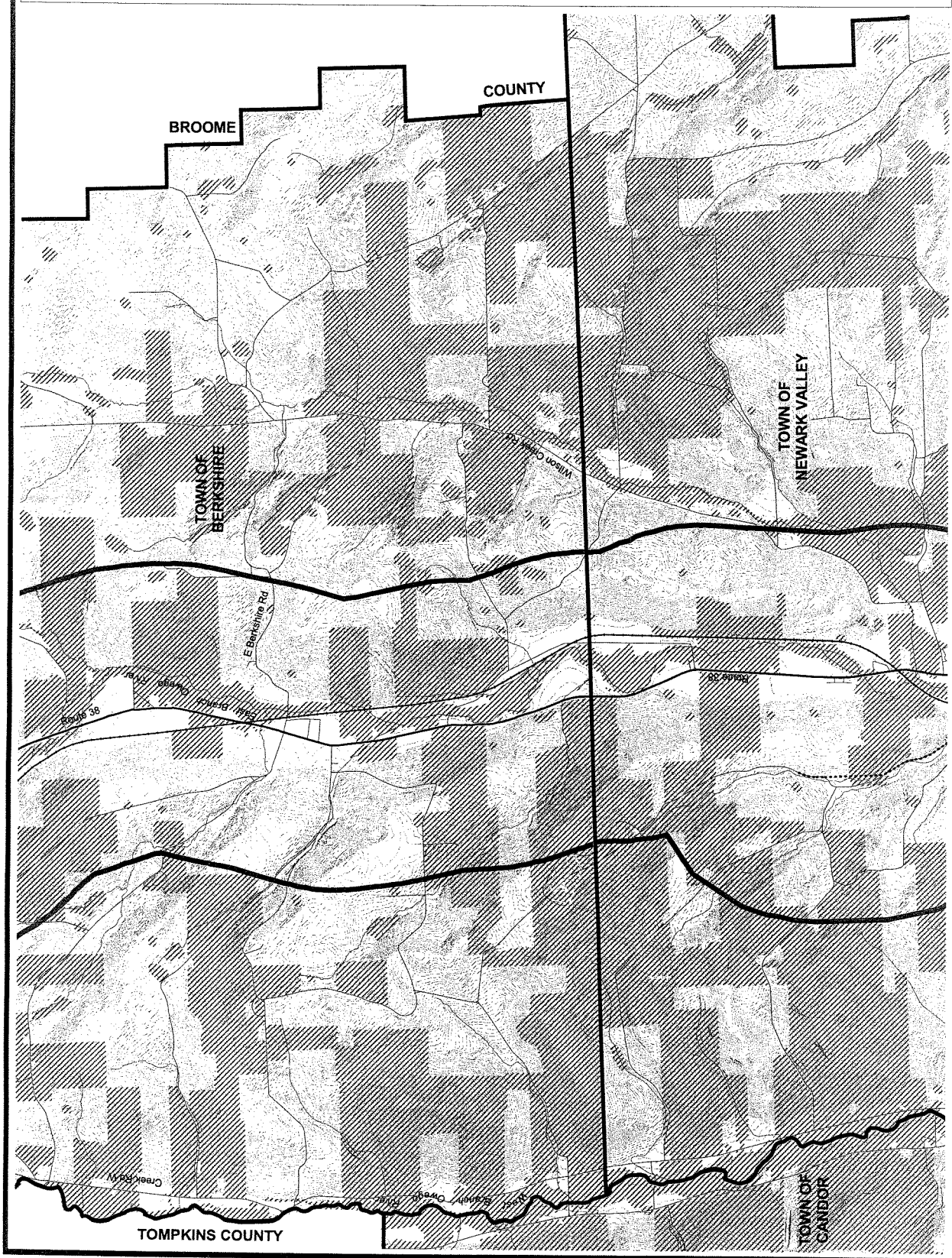
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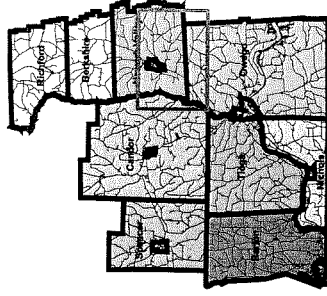
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Development Opportunities Village of Newark Valley



Tioga County



3

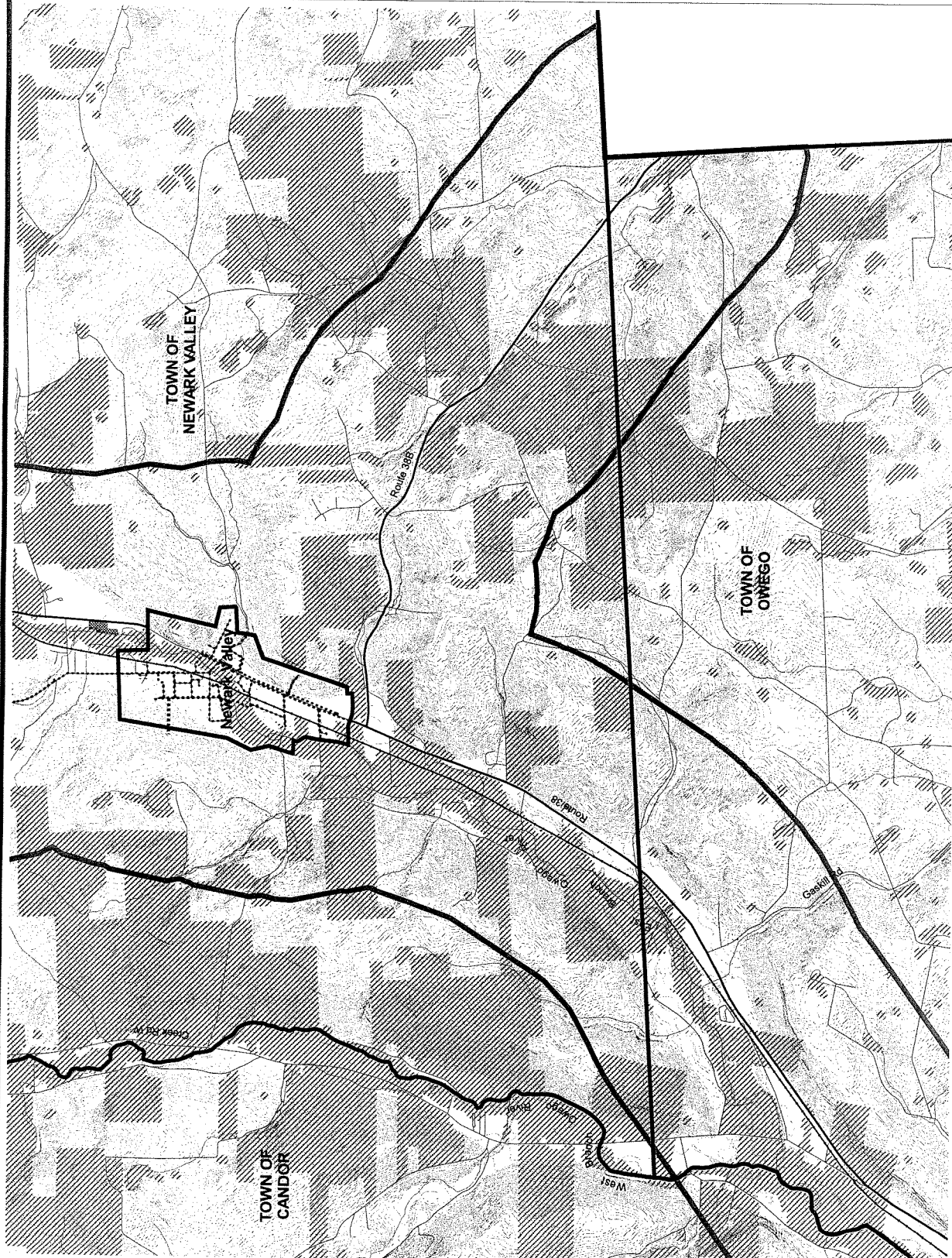
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- Railroad
- Roads
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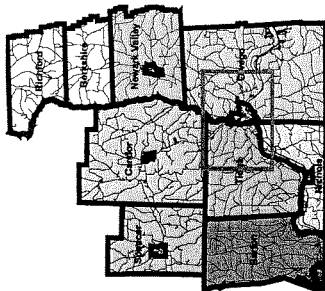


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Development Opportunities

Village of Owego



Tioga County

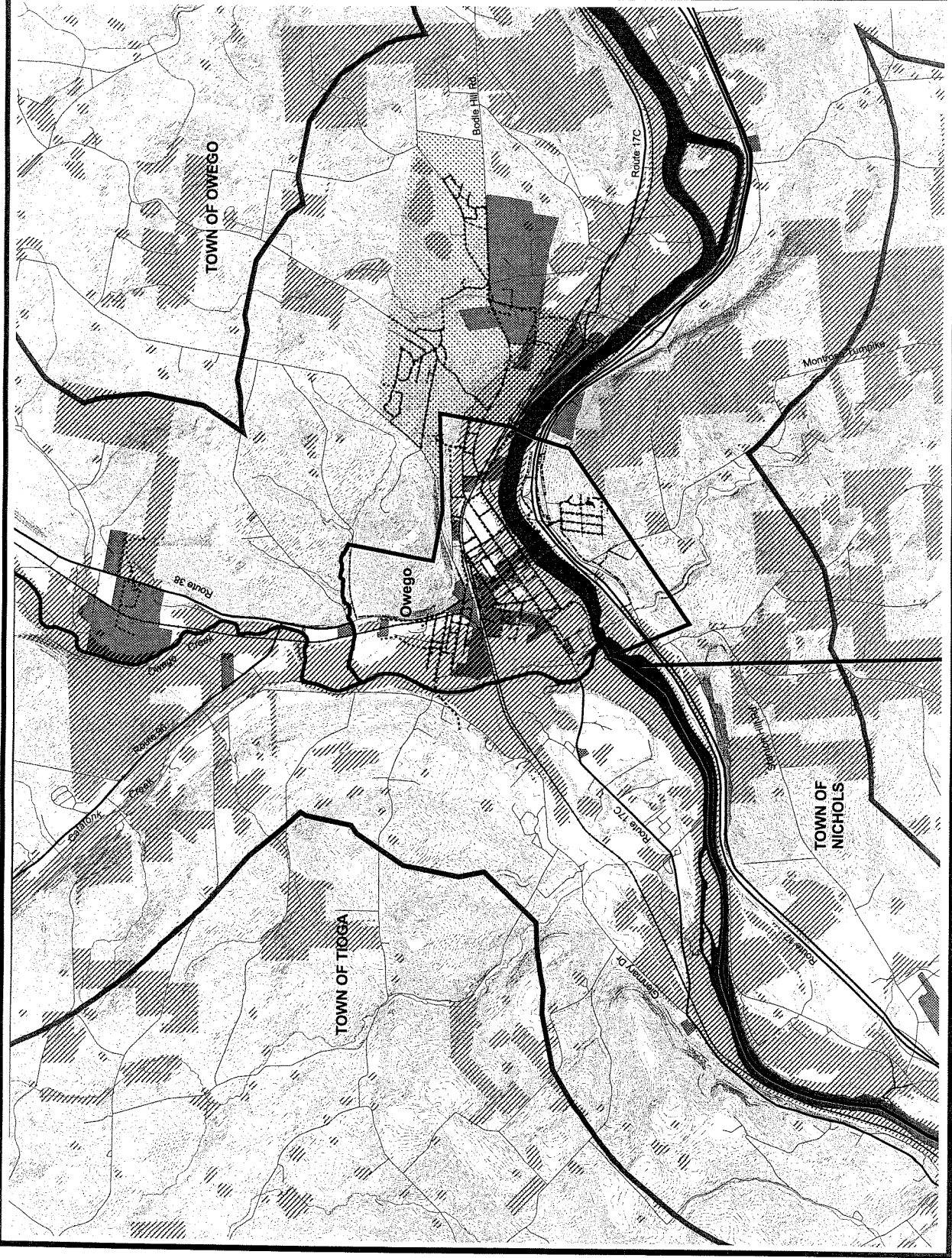
4

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- Area of Interest
- Water Services
- Sanitary Services
- Major Routes
- Railroad
- Roads
- Rivers
- Empire Zone
- Water District
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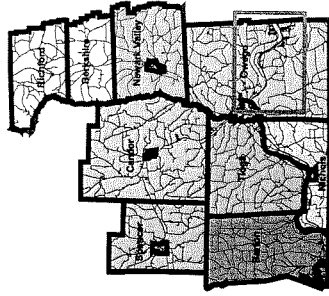


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Development Opportunities

Town of Owego



Tioga County



5

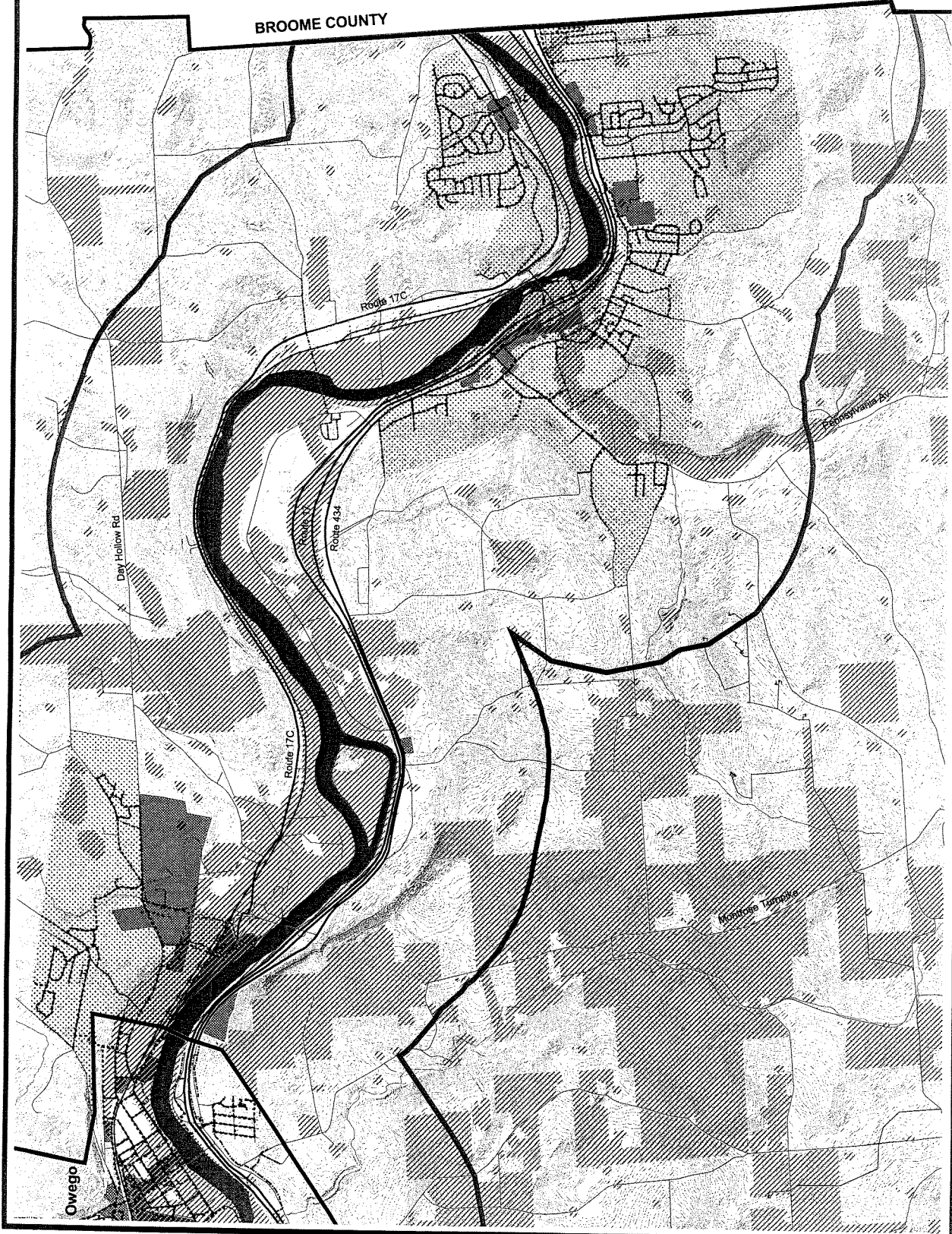
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- Railroad
- Roads
- Rivers
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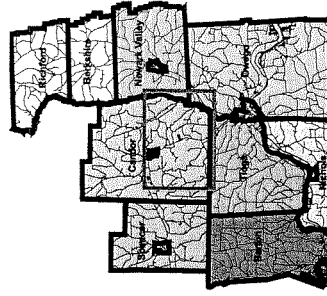


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Development Opportunities

Town of Candor



Tioga County

6



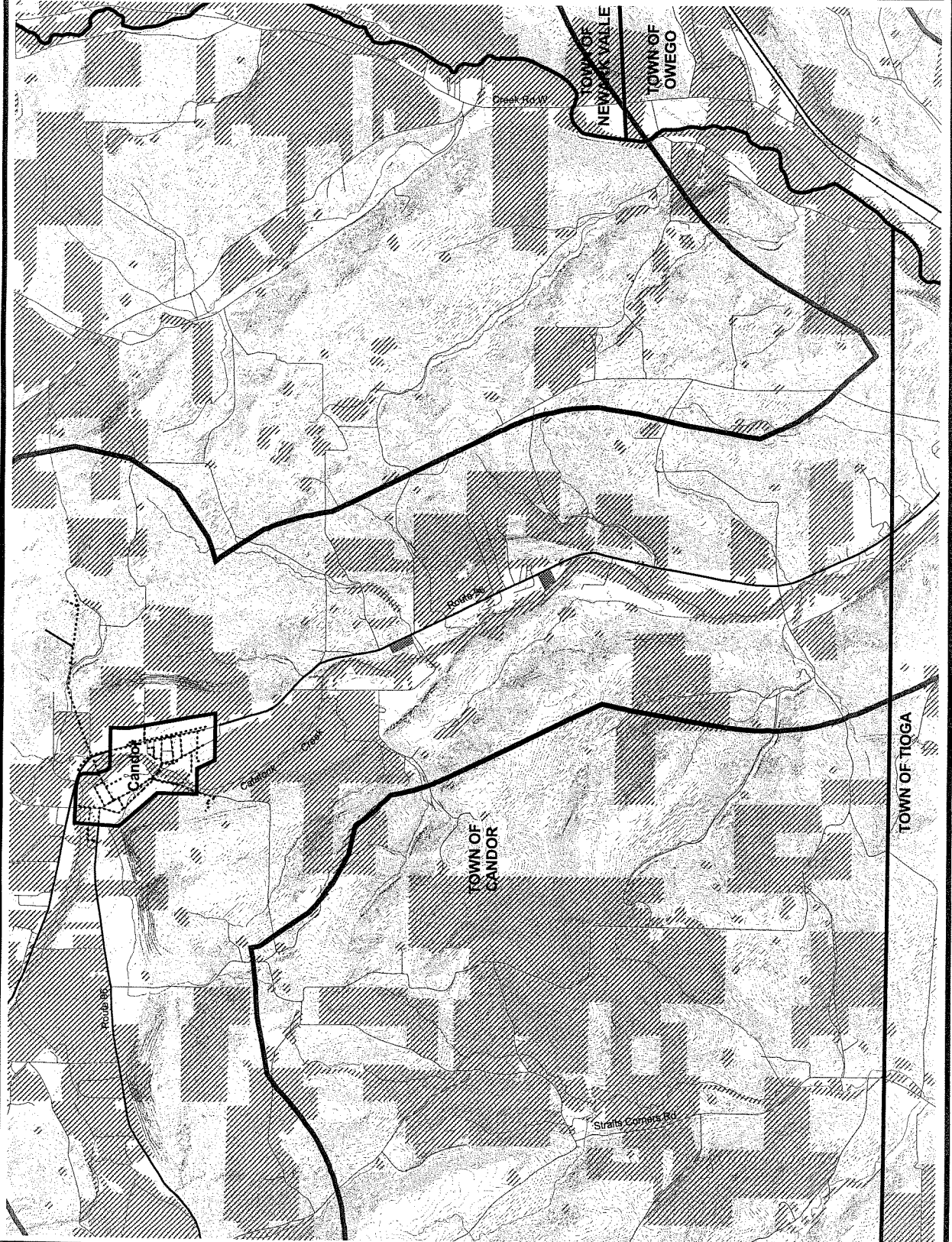
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- Area of Interest
- Water Services
- Sanitary Services
- Major Routes
- Railroad
- Roads
- Rivers
- Empire Zone
- Water District
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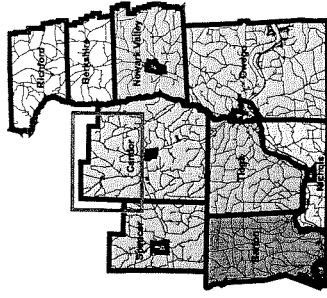


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Development Opportunities

Town of Candor



Tioga County



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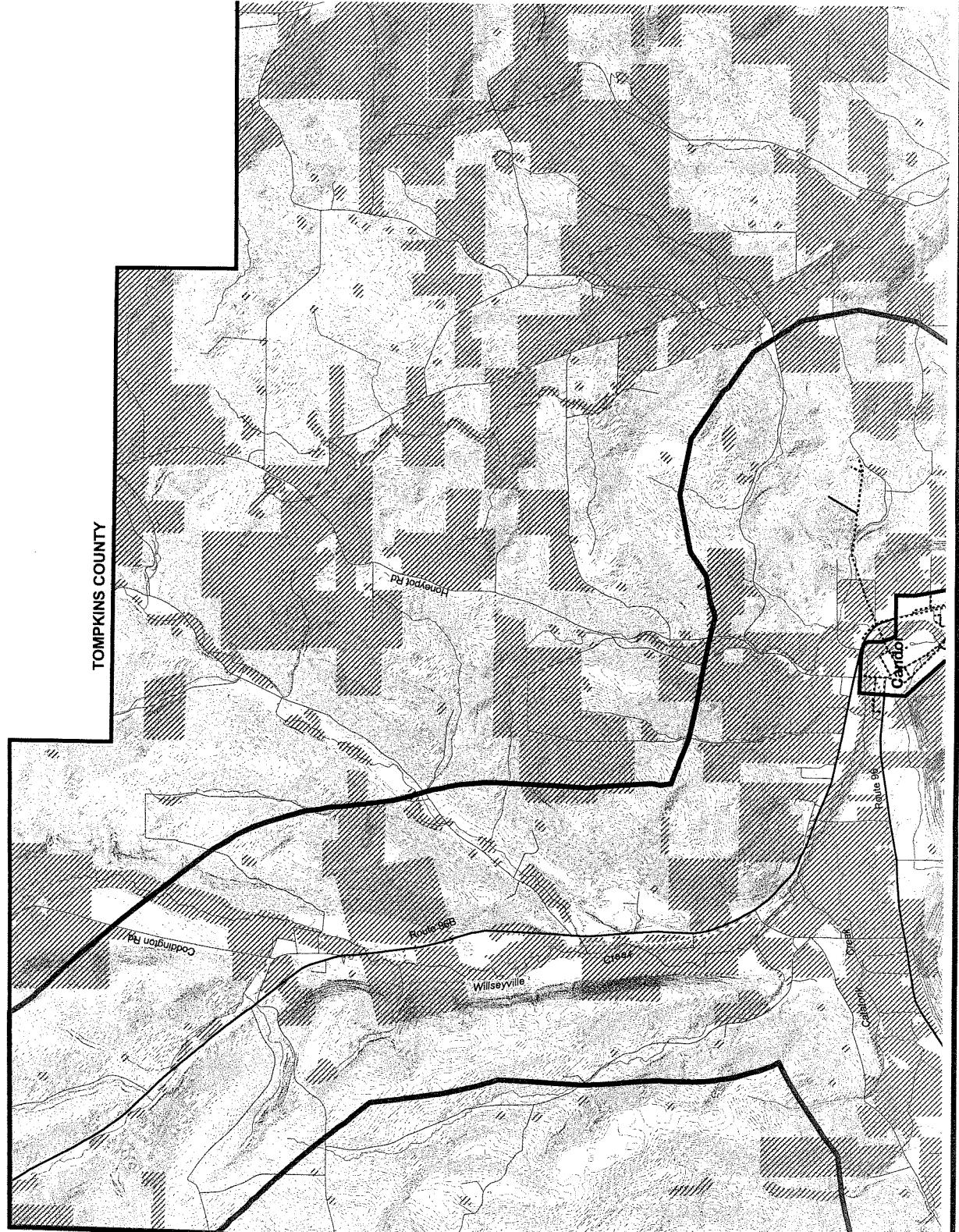
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- Area of Interest
- Water Services
- Sanitary Services
- Major Routes
- Railroad
- Roads
- Rivers
- Empire Zone
- Water District
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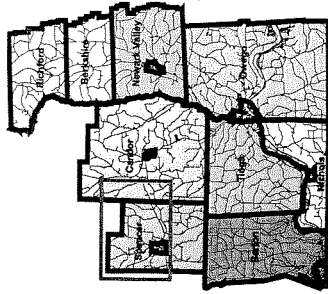


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Development Opportunities

Town of Spencer



Tioga County



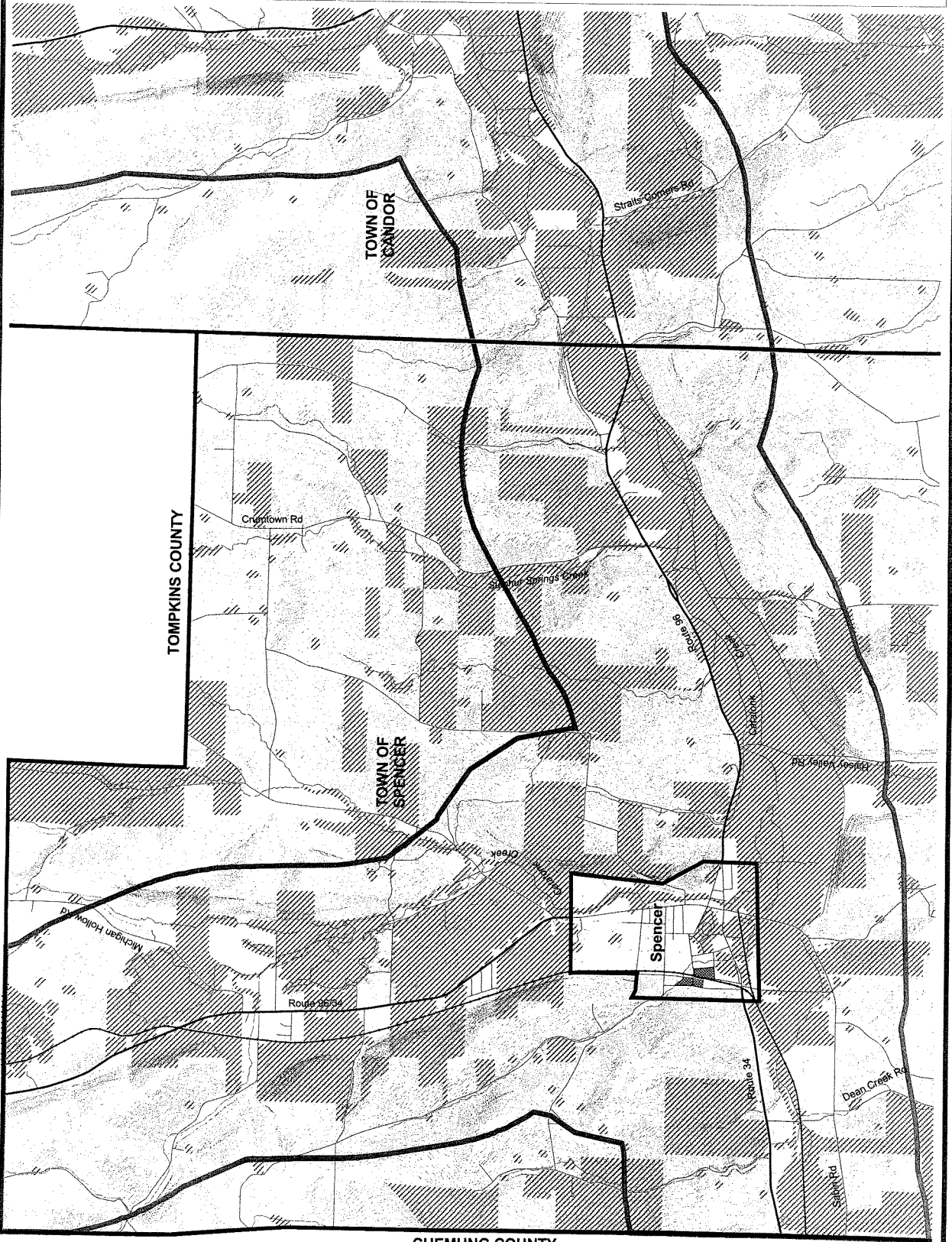
8

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- Sanitary Services
- Major Routes
- Railroad
- Roads
- Rivers
- Empire Zone
- Water District
- Development Constraints
- Tioga County

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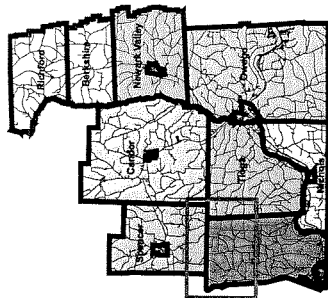
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CHEMUNG COUNTY

Development Opportunities

Town of Barton



Tioga County



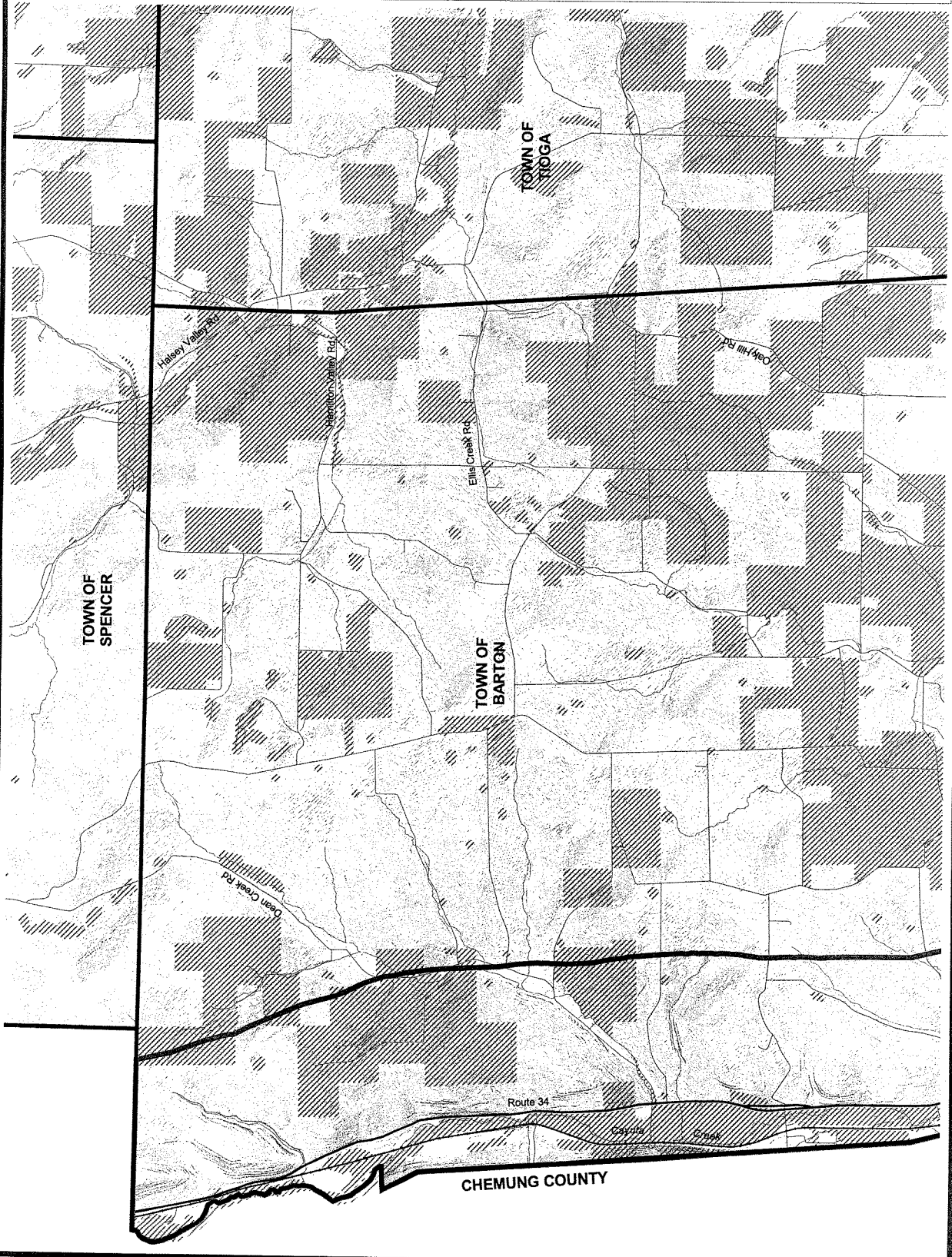
9

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- Area of Interest
- Water Services
- Sanitary Services
- Major Routes
- Railroad
- Roads
- Rivers
- Empire Zone
- Water District
- Development Constraints
- Tioga County

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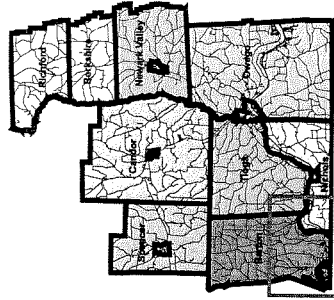


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Development Opportunities

Village of Waverly



Tioga County



10

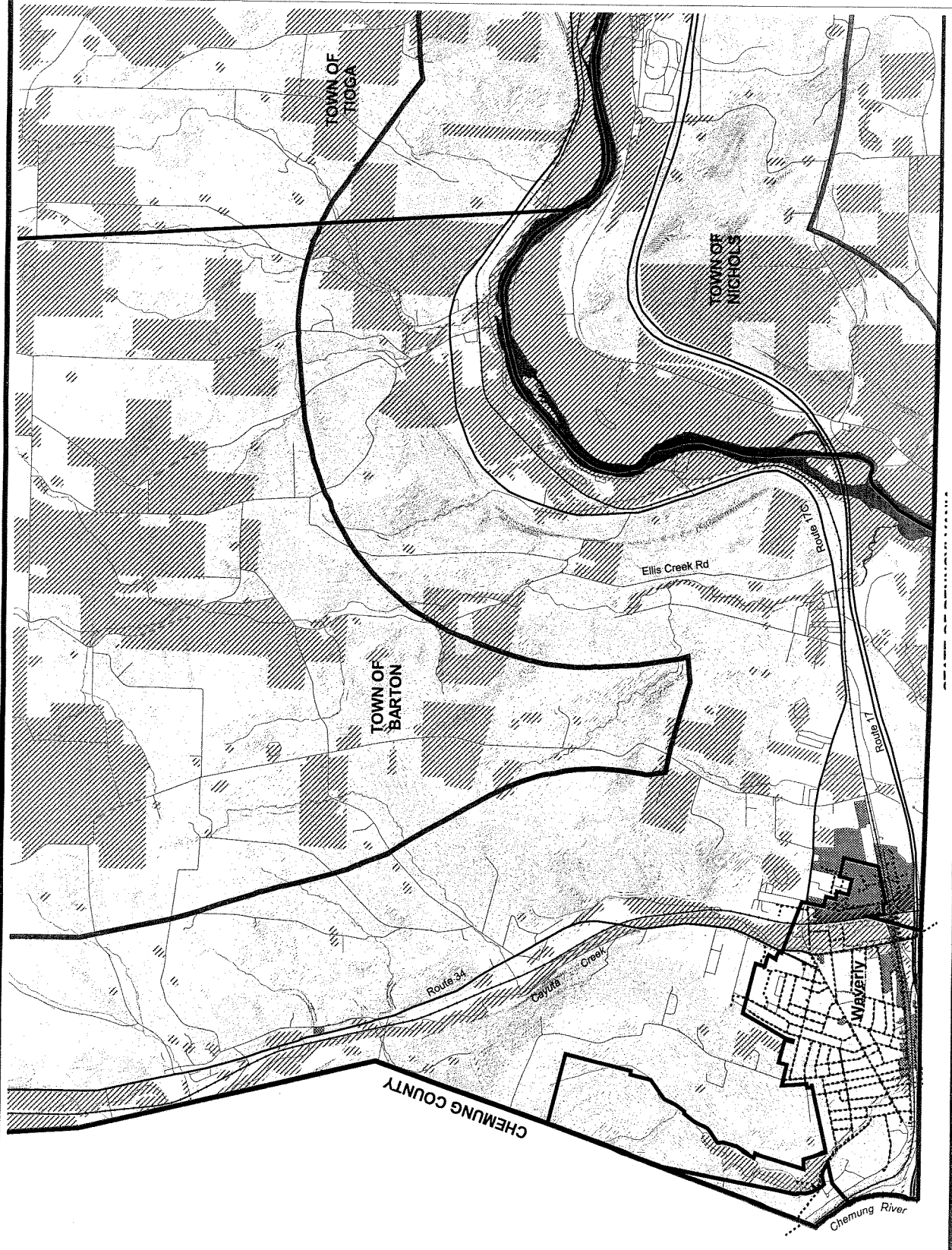
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- Area of Interest
- Water Services
- Sanitary Services
- Major Routes
- Railroad
- Roads
- Rivers
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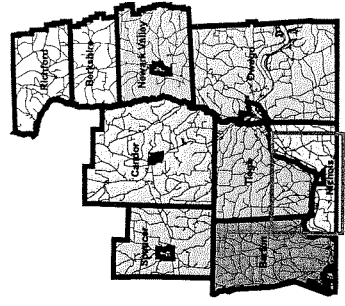


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Development Opportunities

Village of Nichols



Tioga County

11

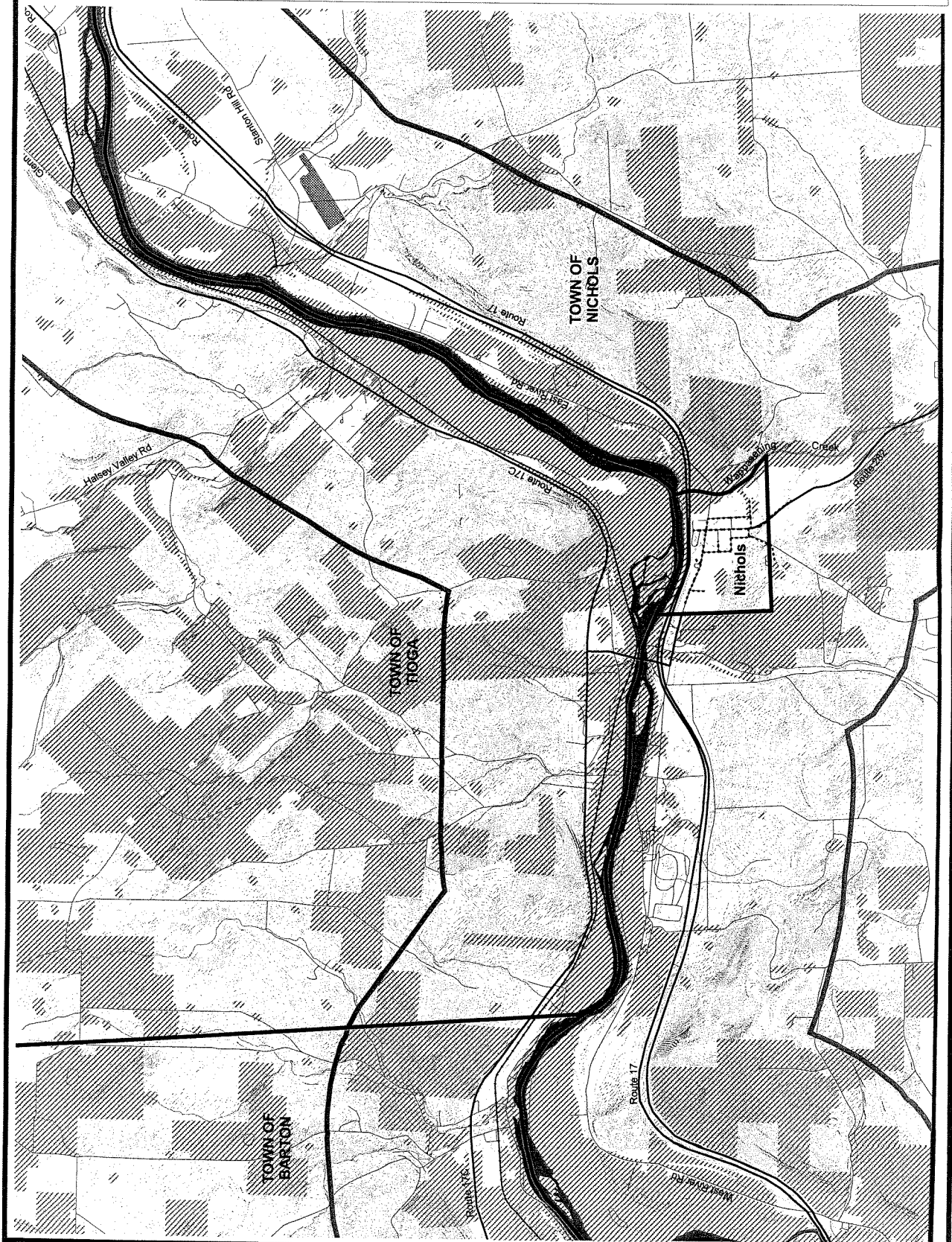
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- Railroad
- Roads
- Rivers
- Empire Zone
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Appendix C

Interview Meeting Minutes

Tioga County Interview Questions

Date: 5-22-03
Municipality: Town of Owego
Representative: Carol Sweeney, Mick Trivosonno, Dean Morgan, Elaine Jardine

Categories:

- Economic Development
- Public Health & Safety
- Infrastructure/Utilities
- Land Use
- Transportation
- Housing Needs

1.) Relative to your municipality what would you identify as your major SWOT's (Strengths, Weaknesses, Opportunities, Threats) for each of the Six Categories?

2.) What are your highest priority issues?

- Development of Route 434 corridor from Broome County Line to Forest Hill Rd.
- Reservoir repairs and addition of emergency generators
- Construction of the Digester Covers at the Apalachin plant

3.) Relative to economic development, what are your needs?

- Utility Extensions on 434 (see additional comments below)

4.) Are local businesses planning relocation, expansion, or closings?

- Lockheed has the potential for growth in the next few years. The town feels the infrastructure is adequate.
- The Route 38 industrial park has yet to experience growth. Additional flows would benefit the systems currently in place (water and sewer force main)

5.) What are the primary reasons for local businesses planning to relocate, expand, or close?

- None indicated

6.) Are there any condition or capacity issues with existing infrastructure services including power, roads, telecommunications, solid waste disposal, and water services?

- The town Indicated support of a county wide compost facility.

Additional Comments:

Health Concerns

- Mcfall Road has had dry wells during drought conditions

Economic Development Sites

- Sewer Extension along 434, Hilton to Forest Hill, and between Johnson's Pools and Village line
- Water Main replacement – Depot Street to Forest Hill
- New reservoir on Forest Hill Approximately 1050' ASL +/-
- Residential development areas include:
 - o Kings Point
 - o East of Tioga Terrace (Kim property),
 - o Waricki Property (north of San Mina)
 - o Pennsylvania Avenue (Hickey's Flat) – extension of Beach Road subdivision
 - o 400 Acre parcel on Ivory Foster Rd (owned by Lockheed Martin)
- Extend sewer up E. Campville to Caferty Hill through Campville Commons.
- Day Hollow Road near Visions Credit Union to Bodle Hill Road is a corridor that could see economic development. Utility extensions will support this growth.

Reservoirs at Deerfield Road, Glann Road (2 tanks), Dover Road, Richfield Road, New Street are old and 2 need replacement (see Conrady report). Also to have emergency power.

Tioga County Interview Questions

Date: 5-29-03

Municipality: Towns of Berkshire/Richford

Representative: Elizabeth Stieglitz, Richard Harrington, Emile Stuhlmiller., Bob Rulli, Martin Wilcox, Skip Hartwig, Bill Simmons

Categories:

-Economic Development
-Land Use

-Public Health & Safety
-Transportation

-Infrastructure/Utilities
-Housing Needs

- 1.) Relative to your municipality what would you identify as your major SWOT's (Strengths, Weaknesses, Opportunities, Threats) for each of the Six Categories?
- 2.) What are your highest priority issues?
 - Health and Safety is the highest concern. In the densely populated areas of each hamlet, water wells and septic systems have inadequate separation and the potential for cross contamination is great.
 - Berkshire sees residential development as the likely economic development that will occur in their community.
- 3.) Relative to economic development, what are your needs?
 - Residential development is the focus in this rural area of the county. Municipal water system would support this growth
- 4.) Are local businesses planning relocation, expansion, or closings?
 - Berkshire furniture factory has no fire protection; this is a problem and could prevent further expansion at this facility.
- 5.) What are the primary reasons for local businesses planning to relocate, expand, or close?
 - No relocations are known at this time
- 6.) Are there any condition or capacity issues with existing infrastructure services including power, roads, telecommunications, solid waste disposal, and water services?

Additional Comments:

- Noticeable water quantity and quality issues are encountered in drought conditions
- Berkshire has a great risk from small lots with well and septic systems – generally supports the notion of municipal infrastructure; Water being the priority.
- Berkshire received a \$400,000 HUD grant in 1995 to replace failing wells and septic systems
- Richford has a number of historic homes where wells and septic are under the foundation. This is perceived to be a large health risk.
- 1986 Richford received HUD Grant to do same thing
- Richford suffered a typhoid outbreak 50+/- years ago, Eastman School had hepatitis outbreak in the 60's
- Both towns expressed interest in an inter-municipal agreement, for shared utility systems
- Richford is seeing residential development on the old Clark Seed Farm. Lots are sized 5-60 acres.

Tioga County Interview Questions

Date: 6-04-03

Municipality: Town of Tioga

Representative: Elaine Jardine, Lew Zorn, Jeff Barnes, Jeff Opett

Categories:

-Economic Development

-Public Health & Safety

-Infrastructure/Utilities

-Land Use

-Transportation

-Housing Needs

- 1.) Relative to your municipality what would you identify as your major SWOT's (Strengths, Weaknesses, Opportunities, Threats) for each of the Six Categories?
- 2.) What are your highest priority issues?
 - Health and safety issues from the potential for contamination of groundwater from septic systems
- 3.) Relative to economic development, what are your needs?
 - Bridge to Lounsberry would help Tioga Center economic development
- 4.) Are local businesses planning relocation, expansion, or closings?
 - Big Box opportunity was lost in part due to lack of water and sewer @ the Metro's site on Rt 96
- 5.) What are the primary reasons for local businesses planning to relocate, expand, or close?
- 6.) Are there any condition or capacity issues with existing infrastructure services including power, roads, telecommunications, solid waste disposal, and water services?

Additional Comments:

- No known health and safety concerns
- One well in Tioga Center tested high nitrates, not over limit
- Pockets of sulfur water exist throughout the town. Results in a noticeable decrease in water quality
- Tioga Central School complex has a sanitary sewage treatment plant. The Town owns the land adjacent to the existing plant and it would seem there is an opportunity to develop a municipal sewer system for the Town based on the existing infrastructure.
- Smithboro is a LOWER priority for water and sewer investment.
- Glenmary Dr. and Rt 96 is a higher priority for water and sewer upgrades. Preliminary feasibility work has already occurred in this vicinity (RCAP and Hawk Engineers).

Tioga County Interview Questions

Date: 5-28-03

Municipality: Town/Village of Candor

Representative: Elaine Jardine, Chad Showers, Terry Collins, Bill Rypkema, Jeff Opett

Categories:

-Economic Development

-Public Health & Safety

-Infrastructure/Utilities

-Land Use

-Transportation

-Housing Needs

1.) Relative to your municipality what would you identify as your major SWOT's (Strengths, Weaknesses, Opportunities, Threats) for each of the Six Categories?

2.) What are your highest priority issues?

The village feels that the upgrade and expansion of their water system should be made a priority. Sewer system creation is seen as less important at this time.

3.) Relative to economic development, what are your needs?

- Village – will need a new well(s) and tank(s) in order to support economic development

4.) Are local businesses planning relocation, expansion, or closings?

- Town is seeing significant growth towards Catatunk on Route 96
- Town and Village both feel we should concentrate on water FIRST then work on sewer
- Sewer areas needs are the same as the water service areas

5.) What are the primary reasons for local businesses planning to relocate, expand, or close?

None noted

6.) Are there any condition or capacity issues with existing infrastructure services including power, roads, telecommunications, solid waste disposal, and water services?

Additional Comments:

- Water meters are old and although operational now, are not reliable and parts are not available. Need to modernize billing system.
- Water system has several "dead ends". Spencer Ave, Reservoir Hill, McMarty St., & Mountain Ave.
- Owego St. is 2" PVC, needs upgrade to minimum 6" for approximately 200 ft.
- The new water tank has 50% expansion capacity and can be expanded to meet the needs of development.
- Pressure for development on Royal Street will require a water main loop. Will also enhance existing business located in the vicinity.
- The village currently has very old 4" water main in various locations. This small diameter main is not adequate for fire protection and they are vulnerable to breakage due to their age. The main needs to be replaced and estimates total approximately 5300'.
- The Village feels that there is no need for public sewers at this time. Privately owned septic systems are functioning well due to the gravel soils located throughout the village limits.
- School is largest user of water in the community; they therefore have the greatest sewer load, although they have just installed new septic systems. No issues are known to exist with respect to the schools septic system Village feels water system should be focused on rather than sewer (at this time)

Tioga County Interview Questions

Date: 5-28-03

Municipality: Town/Village of Newark Valley

Representative: Elaine Jardine, Stu Yetter, Bill Foster, Scott Coombs, Cathy Aingworth

Categories:

-Economic Development
-Land Use

-Public Health & Safety
-Transportation

-Infrastructure/Utilities
-Housing Needs

1.) Relative to your municipality what would you identify as your major SWOT's (Strengths, Weaknesses, Opportunities, Threats) for each of the Six Categories?

2.) What are your highest priority issues?

Water line extension to fire department – lack of pressure
Extend water to school

3.) Relative to economic development, what are your needs?

Ladder Factory has not been re-developed due to age of facility. Sewer would help. Ladder Factory has some contamination on site, may qualify for Brownfield money

4.) Are local businesses planning relocation, expansion, or closings?

None noted

5.) What are the primary reasons for local businesses planning to relocate, expand, or close?

None noted

6.) Are there any condition or capacity issues with existing infrastructure services including power, roads, telecommunications, solid waste disposal, and water services?

Additional Comments:

- Residents of the valley who are NOT on public water likely have coliform – 30-40% test positive
- The community feels they would benefit from public sewers. The feeling is that the water quality will increase along with the recreational use of the Owego Creek

Water System Deficiencies in the Village of Newark Valley

- Some 4" mains
- 67 fire hydrants are old and need replacement
- Water line that exits the village to the north (Reeves water district) is only 6" diameter with 2 feet of cover. It is known to have numerous leaks
- Village officials recognize the need for a new reservoir to replace existing, a new access road to the tank, and a new reservoir on west side of creek.
- Village officials are also concerned with security at the well sites and are interested in providing fences and around the wells and the pump house.
- Village officials feel that their existing water system is very old and vulnerable. They indicated that up to 75% of their waterline will require replacement.

Tioga County Interview Questions

Date: 6-04-03

Municipality: Town/Village of Nichols

Representative: Jeff Opett, Elaine Jardine, Daniel Cofone, Bill Caloroso, Pam Moore

Categories:

-Economic Development

-Public Health & Safety

-Infrastructure/Utilities

-Land Use

-Transportation

-Housing Needs

1.) Relative to your municipality what would you identify as your major SWOT's (Strengths, Weaknesses, Opportunities, Threats) for each of the Six Categories?

2.) What are your highest priority issues?

- Environmental contamination at Agway (petroleum and agricultural chemicals) is a threat to the only remaining municipal well.
- Only one well in the village is currently useable. The community is vulnerable to possible future contamination

3.) Relative to economic development, what are your needs?

- Village officials feels strongly that future revitalization will depend on water and sewer

4.) Are local businesses planning relocation, expansion, or closings?

Village industry is small however the group feels that these industries may have expanded if they had more robust infrastructure. In addition, it is believed that the professional buildings would be better occupied, especially along Main Street where proximity of septic systems limit redevelopment, and property values will rise with infrastructure investment.

5.) What are the primary reasons for local businesses planning to relocate, expand, or close?

6.) Are there any condition or capacity issues with existing infrastructure services including power, roads, telecommunications, solid waste disposal, and water services?

Additional Comments:

- Dry cleaners on South Main St. could use chemicals considered a threat to municipal water supplies. Woods machine shop is also perceived a potential threat
- Village officials indicated that they do NOT want to operate water & sewer systems. As a result, they support the notion of a county wide utility authority.
- The Village has no comp. plan and they feel they need one to map out future growth.
- Kirby park needs water and sewer so that the facility can be more widely utilized by the community. Village officials see this facility as an important contributor to the quality of life in Nichols. The existence of bathrooms would make this is a valuable community resource.

Tioga County Interview Questions

Date: 5-29-03
Municipality: Town/Village of Spencer
Representative: Elaine Jardine, Kevin Perry, Arvo Rautine

Categories:

-Economic Development -Public Health & Safety -Infrastructure/Utilities
-Land Use -Transportation -Housing Needs

1.) Relative to your municipality what would you identify as your major SWOT's (Strengths, Weaknesses, Opportunities, Threats) for each of the Six Categories?

2.) What are your highest priority issues?

- A municipal water system
- Municipal sanitary sewer is a somewhat lesser priority

3.) Relative to economic development, what are your needs?

- A water feasibility study was performed in the 60's and identified the need for municipal infrastructure
- VanEtten is currently planning a water system. The group indicated an interest in a municipal agreement with them to extend water into Spencer.
- Very little residential development potential remains in the Village, due lack of additional roads and dimensional restrictions for wells and septic systems. The Town has significant reserves of un-developed land and could become a bedroom community for the Ithaca Urban Area.
- One economic development site does exist just south of Starfire Swords in the tractor-pull area that encompasses about 7 acres.

4.) Are local businesses planning relocation, expansion, or closings?

- Big M and Todi's Restaurant would benefit from public water. They are currently served with well water and above-ground on-site wastewater systems, and as a food service establishment, must undergo rigorous testing and monitoring to assure state sanitary standards are met.
- New golf course on Fisher Settlement Road could realize expansion with a municipal water system

5.) What are the primary reasons for local businesses planning to relocate, expand, or close?

None Noted

6.) Are there any condition or capacity issues with existing infrastructure services including power, roads, telecommunications, solid waste disposal, and water services?

Additional Comments:

- Previous random testing for water quality has only shown positive for nitrates. No coliform has been detected.
- Sulfer water occurs on Liberty Street.

Tioga County Interview Questions

Date: 6-04-03
Municipality: United Water Nichols
Representative: Elaine Jardine, Al Watkins, Jeff Opett

Categories:

-Economic Development -Public Health & Safety -Infrastructure/Utilities
-Land Use -Transportation -Housing Needs

1.) Relative to your municipality what would you identify as your major SWOT's (Strengths, Weaknesses, Opportunities, Threats) for each of the Six Categories?

2.) What are your highest priority issues?

- Relying on a single well that is located in an area of known contamination is considered a very large liability in the Village.
- United Water supports connecting water line from Lounsberry to the Village. This will add redundancy and increase use

3.) Relative to economic development, what are your needs?

- None noted, United Water is a privately held company and is not directly involved with economic development. They would be interested in extending water lines as a business venture and expressed moderate interest in Tioga Park expansion

4.) Are local businesses planning relocation, expansion, or closings?

None noted

5.) What are the primary reasons for local businesses planning to relocate, expand, or close?

None noted

6.) Are there any condition or capacity issues with existing infrastructure services including power, roads, telecommunications, solid waste disposal, and water services?

Additional Comments:

- 2 wells in Nichols – Well #1 became contaminated (Johnson Street) MCL exceeded in 1994
- Other areas of contamination exist in the village include gasoline and dry cleaning chemicals
- This contamination threatened well #2 on River Street – DEC installed an air stripper and operated for several years. This is the biggest threat for Nichols
- Replacing well #1 is about \$200,000

Tioga County Interview Questions

Date: 5-04-03
Municipality: United Water Owego
Representative: Elaine Jardine, Al Watkins, Jeff Opett

Categories:

-Economic Development -Public Health & Safety -Infrastructure/Utilities
-Land Use -Transportation -Housing Needs

1.) Relative to your municipality what would you identify as your major SWOT's (Strengths, Weaknesses, Opportunities, Threats) for each of the Six Categories?

2.) What are your highest priority issues?

- United Water supports installation of a new river crossing and/or upgrading of existing 8" crossing. This will add redundancy and increase usage.

3.) Relative to economic development, what are your needs?

- None noted, United Water is a privately held company and is not directly involved with economic development.
- United water has a great deal of excess capacity near Lockheed Martin and Sanmina. This capacity can be used to leverage economic development.

4.) Are local businesses planning relocation, expansion, or closings?

None noted

5.) What are the primary reasons for local businesses planning to relocate, expand, or close?

None noted

6.) Are there any condition or capacity issues with existing infrastructure services including power, roads, telecommunications, solid waste disposal, and water services?

Additional Comments:

- United Water is interested in extending service along Glenmary Drive. They currently have a small diameter main that services the Glenmary Inn but the pressure and flow are not adequate for fire protection. The water line is currently connected to the Talcott St. Bridge and this structure is scheduled for replacement. United water is concerned about the maintenance of service through construction of this facility.
- The Canawancee area of the Village is not currently serviced with water and sewer. There is a know soil contamination problem in the vicinity so the private wells on these properties are vulnerable. A grant was successfully obtained to service this area with water, which United Water Owego partnered with the Village. United Water has heard nothing from the Village about doing this project.
- United water is planning a water line extension northward along the west side of Rt. 96 to service the Franzen Apartment Complex. They plan to leave a TEE at Dean St. so that future expansion to the North is facilitated.
- United water expressed a general willingness to extend water into neighboring communities via a wholesale water sale agreement.

Tioga County Interview Questions

Date: 5-28-03

Municipality: Village of Waverly & Town of Barton

Representative: Elaine Jardine, Mayor Anne Martin, Mike Steck, Bill Hotchkiss

Categories:

-Economic Development

-Public Health & Safety

-Infrastructure/Utilities

-Land Use

-Transportation

-Housing Needs

1.) Relative to your municipality what would you identify as your major SWOT's (Strengths, Weaknesses, Opportunities, Threats) for each of the Six Categories?

2.) What are your highest priority issues?

- Need to increase water storage capacity (see additional comments)
- Disposal of sludge is a significant concern. It is not known how long the village can continue dealing with sludge through land filling. A longer term, lower cost solution is required.

3.) Relative to economic development, what are your needs?

- The Sewer Plant appears to have enough excess capacity to support significant economic development however INI is causing the plant to exceed their discharge permits during wet weather.
- The Village feels that a new water line past the sewage treatment plant to the dog food plant (Hagen) is necessary. Approximately 3000 LF of 8" main is required.
- The village is very interested in the reconfiguration of the dam spillway. This will reduce turbidity in the lower reservoir and allow the slow sand filter to operate very economically.
-

4.) Are local businesses planning relocation, expansion, or closings?

None noted

5.) What are the primary reasons for local businesses planning to relocate, expand, or close?

Leprino could use another sewer line – they currently surcharge the current line

6.) Are there any condition or capacity issues with existing infrastructure services including power, roads, telecommunications, solid waste disposal, and water services?

Additional Comments:

- Town of Barton would like to extend water and sewer from Elba Trailer Park to Sunset Trailer Park. Also wants to extend water and sewer to vacant parcel south of Jones Tract
- Lack of storage is the primary concern for water. Village officials report only one 750,000 gallon tank is currently in service. The village currently pumps up to 1mgd. They wish to add a 2 million gallon reservoir, either next to the existing or on the corner of Waverly St. and Spring St. USDA money is currently available for this project.
- The Village is interested in replacing the small diameter water main located throughout the village. Up to 1500' of 3" diameter pipe is on Lyman Ave., Spring St. and Garfield. These facilities should at least be 8" diameter.
- The village also wishes to replace 4000' of 4" diameter water main on Fulton Street.
- The Village and the Town feel that a new water main crossing by the Broad St. extension bridge. (Cayuta Creek) is important for reliability and redundancy issues.
- Sludge disposal is viewed as threat, the group voiced support for a countywide compost facility
- Inflow and Infiltration is a big problem with respect to the SPEDES discharge permit
- Up to 1/3 of the village sewer system is AC pipe. Nearly 15-20% of manholes are leaking. Village officials feel that sewer relining is the best choice for repair.

- In order to support the Sewage Treatment Plant upgrade to 1.3 mgd, Village officials report the need to upgrade the pumps in chlorine contact tanks. The rest of the plant approvals are pending DEC concurrence.

Town of Barton

- Need another well with booster station
- Project in progress to extend water and sewer to Jones tract and Elba trailer park scheduled for completion in November 2003. Town would like to see water and sewer extended further east along Route 17C down to Ellis Creek that would expand service to Gail Ann Estates, Maple Lane and Sunset Trailer Parks, and Baggerly subdivision.

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Village of Owego Interview

Date: 5/23/03

Municipality: Village of Owego

Representative: Mayor Fink, Ron Horton, Mic Knapp, Elaine Jardine, Jeff Opett

Categories:

-Economic Development

-Public Health & Safety

-Infrastructure/Utilities

-Land Use

-Transportation

-Housing Needs

1.) Relative to your municipality what would you identify as your major SWOT's (Strengths, Weaknesses, Opportunities, Threats) for each of the Six Categories?

- Village officials report that their Treatment Plant is currently at 40% capacity of a total of 1 M gpd. There is more than enough excess capacity to support significant growth.

2.) What are your highest priority issues?

- Trunk sewer replacement on Front street from Paige to Williams was identified as the highest priority. This causes the plant to violate their SPEDES Discharge permit during wet weather conditions as a result of inflow and infiltration.
- Sewer Plant officials indicated that a new Mechanical Bar Screen at the plant is a high priority as well.

3.) Relative to economic development, what are your needs?

- Significant pressure for development is anticipated on Rt 434 on the south side of the river. Village officials expressed an interest to extend water and sewer infrastructure to the east to Johnson Pools.
- In order to support future growth at the Rt 38 Industrial Park, Village officials indicated the need to increase the sewer pipe diameter between Dean Street and the Thrift Store.

4.) Are local businesses planning relocation, expansion, or closings?

- Stakmore has expressed an interest in expanding their operations to the north to the site now occupied by the Village Offices. This effort has been complicated due to the existence of Railroad property and the associated difficulties in dealing with these entities. Stakmore wants to expand but they are constrained by lack of land. Infrastructure availability does not seem to be a concern.

5.) What are the primary reasons for local businesses planning to relocate, expand, or close?

6.) Are there any condition or capacity issues with existing infrastructure services including power, roads, telecommunications, solid waste disposal, and water services?

- Contaminated wells on Dean Street approximately 4 wells tested Positive for E.Coli

Additional Comments:

- The Village supports the notion of a County wide compost facility. They indicated it would be a good insurance policy for long range fiscal planning.
- Village officials mentioned a willingness to enter into an inter municipal agreement with the Town of Tioga specifically with the sewer main expansion along Glenmary Drive, Route 17C and secondarily Route 96.
- The Owego Middle School is being considered as a possible site for a business incubator. This may require a minor force main upgrade depending on the usage and occupancy.
- Fairgrounds main bathroom will be connected into the sewer system this summer. The Village is considering abandoning the septic system and installing a holding tank for the grandstand bathrooms.

FA12200 Tioga County REAP LDC\Site Selection\Village of Owego 5-23-03.doc

Appendix D

Project Ranking Materials

Appendix D

Table of Contents

- Preliminary Projects Rating Criteria
- Preliminary Projects Ranking Matrix
- Final Infrastructure Project Ranking Procedure Including Economic Cost
- Final Infrastructure Project Rating Criteria Including Economic Cost
- Final Infrastructure Project Ranking Procedure Excluding Economic Cost
- Final Infrastructure Project Rating Criteria Excluding Economic Cost
- Final Infrastructure Project Descriptions
- Final Land Use and Environmental Constraints Ratings
- Final Infrastructure Project Ranking Matrix Including Economic Cost
- Final Infrastructure Project Ranking Matrix Excluding Economic Cost
- Final Summary of Project Rankings

Preliminary Project Selection Criteria

Tioga County REAP LDC

1. Health & Safety
 - a. Known well contamination (coloform, nitrates)
 - b. Proximity to known hazardous waste sites
 - c. Proximity to Bulk Fuel Storage
 - d. Dense Populations Served by private wells
 - e. Poor Soils For Subsurface Disposal
 - f. Discharge Permit Violations
 - g. OSHA or Health & Safety Concerns for operators or employees
 - h. Vulnerability to terrorism
 - i. Vulnerability to vandalism
 - j. Consent orders
2. Economics
 - a. EDU's Served (more is better)
 - b. Household Incomes (lower is Better)
 - c. Consistency w/Land Use Plan
 - d. Economic Development Potential
3. Municipal Administration
 - a. Size of Municipality Served
 - b. Presence of an existing Water or Sewer District
 - c. Public or Private Ownership
 - d. Regulation Requirements
4. Project Costs
 - a. Project Costs close to \$1,500,000
 - b. \$/EDU
 - c. Potential for Additional Funding
5. Environmental Constraints
 - a. Agricultural Districts
 - b. Wetlands
 - c. Archeological
 - d. Topography
 - e. Geology
 - f. Hydrology
 - g. Transportation
 - h. State & Fed Park Lands
 - i. Haz. Waste Sites
 - j. Flood Plains
6. Feasibility with Respect to Schedule
 - a. Pre-application submitted to USDA by mid May
 - b. Complete Construction 9/30/09

Preliminary Projects Ranking Matrix

Tioga County REAP LDC

Project #	Project Descriptions	Project Cost		Health and Safety		Economics		Municipal Administration		Project Costs		Environmental Constraints		Feasibility with Schedule		TOTAL
9	Town of Owego sewer & water system upgrades	\$1.0M	6.07	6.07	8.07	8.00	8.14	7.43	8.14	43.79	8.14	43.79				
3	Village of Candor Water System Upgrades	\$1.8M	6.84	7.29	7.29	8.14	7.57	6.79	8.14	43.71	6.79	43.71				
11	Village Sewer Upgrades	\$0.84M	6.36	6.43	7.86	7.43	7.07	7.93	7.43	43.07	7.93	43.07				
21	Town of Owego Water Tanks Rehabilitation	\$1.3M	5.14	6.93	7.71	7.14	6.86	7.21	7.14	41.00	7.21	41.00				
5	Newark Valley Water System Upgrades	\$4.0M	6.50	6.00	6.86	6.07	7.50	5.29	6.07	38.21	5.29	38.21				
20	County Wide Compost Facility	TBD	5.86	6.14	6.21	4.50	7.07	3.50	6.21	33.29	3.50	33.29				
10	Town of Owego Rt. 38 water and sewer system upgrades	\$6.5M	5.14	6.29	6.86	4.71	5.71	4.36	6.86	33.07	4.36	33.07				
12	Town of Nichols Water Main Extension	\$3.4M	6.21	5.86	5.14	6.43	5.93	3.43	5.14	33.00	5.93	33.00				
14	Tioga Center Water District	\$3.9M	7.36	4.93	4.36	6.07	5.93	3.64	4.36	32.29	5.93	32.29				
19	Town of Barton Water Line	\$2.5M	6.71	5.21	5.86	5.07	5.93	3.29	5.07	32.07	5.93	32.07				
4	Village of Candor sewer system	\$9.2M	6.64	4.71	5.64	4.43	6.71	3.43	5.64	31.57	6.71	31.57				
16	Village of Waverly Water System Upgrades	TBD	6.07	5.43	6.07	3.93	5.93	3.79	6.07	31.21	5.93	31.21				
18	Town of Barton Sewer Line Extension	\$3.9M	6.00	4.86	5.64	4.71	6.57	3.21	5.64	31.00	6.57	31.00				
6	Newark Valley Sewer System	\$10.4M	6.21	4.57	5.50	3.57	7.21	3.43	5.50	30.50	7.21	30.50				
17	Village of Waverly Sewer Plant Upgrades	TBD	5.43	5.36	6.36	3.86	5.71	3.43	6.36	30.14	5.71	30.14				
1	Village of Spencer Water System	\$9.6M	8.29	4.57	4.29	3.43	5.93	2.57	4.29	29.07	5.93	29.07				
15	Tioga center Sewer Main Extension	\$2.9M	6.43	4.50	3.71	5.43	5.57	3.14	3.71	28.79	5.57	28.79				
7	Richford –Berkshire Water District	\$6.2M	7.79	4.21	3.64	4.79	5.21	2.57	3.64	28.21	5.21	28.21				
13	Town of Nichols Sewer Main Extension	\$10.2M	6.36	5.43	4.50	3.36	5.14	2.86	4.50	27.64	5.14	27.64				
8	Richford – Berkshire Sewer District	\$8.0M	7.07	4.07	3.43	4.57	5.86	2.50	3.43	27.50	5.86	27.50				
2	Village of Spencer Sewer System	\$13.2M	7.57	3.79	4.00	2.64	6.29	2.50	4.00	26.79	6.29	26.79				

Please rate each of the six criteria from 1 to 10 (1 = worst, 10 = best).

Tioga County Infrastructure Project Ranking Procedure

Including Economic Cost

Procedure:

Each person will have a 2-3 sentence project description that will help identify the nature of the project, its approximate cost, approximate number of Equivalent Dwelling Units (EDU) served, and location. Each person will also be given a sheet that depicts what should be taken into consideration while rating each criterion for the projects. Finally, each person will have a matrix in which only the three white columns should be filled in by the participant. Please note that the project number is for project identification only, this does not represent any type of priority or ranking.

The purpose of this process is to rate each criteria (Health & Safety, Economic Cost, and Municipal Administration) based on a scale of 1-3 for each project. In this case, a rating of 1 is for projects that are **LEAST PROBABLE** or have the **LEAST NEED** to proceed and a rating of 3 is for projects that are **MOST PROBABLE** or have the **MOST NEED** to proceed for that specific criteria. **A RATING OF 3 IS ALWAYS THE BEST RATING TO GIVE; A RATING OF 1 IS ALWAYS USED AS THE WORST RATING.** Keep in mind that the projects that are most important to you should be ranked the highest.

Health & Safety Example: A rating of 1 would be suitable for health and safety if a specific project is in an area with no health concerns. On the other hand, if there are major health concerns then a rating of 3 would be appropriate. A rating of 3 represents that the project is most probable to proceed because the health and safety concerns in the project area are in need of mitigation. The same principle applies to economic cost and municipal administration.

Economic Cost Example: A rating of 3 would be given to a project with a high number of EDU's served, a low project cost/EDU, and low average incomes in the project area.

Municipal Administration Example: A rating of 3 would be given to a project that has the most probability of proceeding to completion due to the appropriate knowledge and resources available in the project area.

After you have finished rating all of the projects each of the criteria will have to be given a weight. By giving criteria a higher weight you are saying that that criterion should be considered more important in the overall ranking of the projects. For this process please weight the five criteria ranging from 1-5, none of the criteria can be weighted the same (each weight number 1-5 should only be used once). Place this number in the brackets next to weighted feasibility for each criterion on the matrix.

The final product will be a matrix with the highest ranked projects on top and the lowest ranked projects on the bottom based on the weighted average.

NOTE: Land Use and Environmental Constraints have already been rated based upon Geographic Information System (GIS) mapping. The Tioga County Land Use Plan and a Site Selection map for economic development was utilized in ranking the land use criteria. Environmental constraints mapping was created for Tioga County for the purpose of rating the Environmental Constraints criteria. These criteria were rated on a scale of 1-3, as shown below.

Land Use & Economic Development

3 = Highly compatible with future land use and high potential for economic development

2 = Compatible with future land use and possible potential for economic development

1 = Not compatible with future land use and no potential for economic development

Environmental Constraints

3 = Few or no constraints (Most Compatible)

2 = Somewhat constrained (Somewhat Compatible)

1 = Highly constrained (Least Compatible)

Tioga County Infrastructure Project Rating Criteria

Including Economic Cost

1. Health & Safety
 - a. Proximity to Known Contaminated Wells
 - b. Proximity to Known Hazardous Waste Sites
 - c. Proximity to Bulk Fuel Storage
 - d. Age of Wells/Infrastructure
 - e. Drought Related Issues
 - f. Infrastructure Close to or at Capacity
 - g. History of Water Quality
 - h. Population Density
 - i. Poor Soils For Subsurface Disposal
 - j. Discharge Permit Violations
 - k. OSHA or Health & Safety Concerns for operators or employees
 - l. Vulnerability to terrorism
 - m. Vulnerability to vandalism
 - n. Consent orders

2. Economic Cost
 - a. Equivalent Dwelling Units (EDU) Served (more is better)
 - b. Cost/EDU (lower is better)
 - c. Household Incomes (lower is Better)

3. Municipal Administration
 - a. Size of Municipality Served
 - b. Presence of an existing Water or Sewer District
 - c. Public or Private Ownership
 - d. Regulation Requirements

4. Environmental Constraints
 - a. Agricultural Districts
 - b. Wetlands
 - c. Archeological
 - d. Topography (Slope)
 - e. Geology
 - f. Hydrology
 - g. Transportation (Highway Access)
 - h. State & Fed Park Lands
 - i. Flood Plains

5. Land Use & Economic Development
 - a. Consistent with Land Use Plan
 - b. Economic Development Potential

Tioga County Infrastructure Project Ranking

Excluding Economic Cost

Procedure:

Each person will have a 2-3 sentence project description that will help identify the nature of the project and location. Each person will also be given a sheet that depicts what should be taken into consideration while rating each criterion for the projects. Finally, each person will have a matrix in which only the two white columns should be filled in by the participant. Please note that the project number is for project identification only, this does not represent any type of priority or ranking.

The purpose of this process is to rate both criteria (Health & Safety and Municipal Administration) based on a scale of 1-3 for each project. In this case, a rating of **1** is for projects that are **LEAST PROBABLE** or have the **LEAST NEED** to proceed and a rating of **3** is for projects that are **MOST PROBABLE** or have the **MOST NEED** to proceed for that specific criteria. **A RATING OF 3 IS ALWAYS THE BEST RATING TO GIVE; A RATING OF 1 IS ALWAYS USED AS THE WORST RATING.** Keep in mind that the projects that are most important to you should be ranked the highest.

Health & Safety Example: A rating of 1 would be suitable for health and safety if a specific project is in an area with no health concerns. On the other hand, if there are major health concerns then a rating of 3 would be appropriate. A rating of 3 represents that the project is most probable to proceed because the health and safety concerns in the project area are in need of mitigation. The same principle applies to economic cost and municipal administration.

Municipal Administration Example: A rating of 3 would be given to a project that has the most probability of proceeding to completion due to the appropriate knowledge and resources available in the project area.

After you have finished rating all of the projects each of the criteria will have to be given a weight. By giving criteria a higher weight you are saying that that criterion should be considered more important in the overall ranking of the projects. For this process please weight the four criteria ranging from 1-4, none of the criteria can be weighted the same (each weight number 1-4 should only be used once). Place this number in the brackets next to weighted feasibility for each criterion on the matrix.

The final product will be a matrix with the highest ranked projects on top and the lowest ranked projects on the bottom based on the weighted average.

NOTE: Land Use and Environmental Constraints have already been rated based upon Geographic Information System (GIS) mapping. The Tioga County Land Use Plan and a Site Selection map for economic development was utilized in ranking the land use criteria. Environmental constraints mapping was created for Tioga County for the

purpose of rating the Environmental Constraints criteria. These criteria were rated on a scale of 1-3, as shown below.

Land Use & Economic Development

- 3 = Highly compatible with future land use and high potential for economic development
- 2 = Compatible with future land use and possible potential for economic development
- 1 = Not compatible with future land use and no potential for economic development

Environmental Constraints

- 3 = Few or no constraints (Most Compatible)
- 2 = Somewhat constrained (Somewhat Compatible)
- 1 = Highly constrained (Least Compatible)

Tioga County Infrastructure Project Rating Criteria

Excluding Economic Cost

1. Health & Safety
 - a. Proximity to Known Contaminated Wells
 - b. Proximity to Known Hazardous Waste Sites
 - c. Proximity to Bulk Fuel Storage
 - d. Age of Wells/Infrastructure
 - e. Drought Related Issues
 - f. Infrastructure Close to or at Capacity
 - g. History of Water Quality
 - h. Population Density
 - i. Poor Soils For Subsurface Disposal
 - j. Discharge Permit Violations
 - k. OSHA or Health & Safety Concerns for operators or employees
 - l. Vulnerability to terrorism
 - m. Vulnerability to vandalism
 - n. Consent orders

2. Municipal Administration
 - a. Size of Municipality Served
 - b. Presence of an existing Water or Sewer District
 - c. Public or Private Ownership
 - d. Regulation Requirements

3. Environmental Constraints
 - a. Agricultural Districts
 - b. Wetlands
 - c. Archeological
 - d. Topography (Slope)
 - e. Geology
 - f. Hydrology
 - g. Transportation (Highway Access)
 - h. State & Fed Park Lands
 - i. Flood Plains

4. Land Use & Economic Development
 - a. Consistent with Land Use Plan
 - b. Economic Development Potential

Tioga County Infrastructure Project Descriptions

1. T/o Barton – Water System Extension:

Project involves extension of public water system along Rt. 17C from Notch Hill Road past Ellis Creek to service several subdivisions and a trailer park. Project would extend water from a watermain extension (currently under construction) which ends at the Elba trailer Park. Project includes approximately 11,000 linear feet of watermain, water services, and appurtenances.

2. T/o Barton – Sewer System Extension:

Project involves extension of public sewer system along Rt. 17C from Notch Hill Road past Ellis Creek to service several subdivisions and a trailer park. Project would extend sewer from a sewermain extension (currently under construction) which ends at the Elba trailer Park. Project includes approximately 11,000 linear feet of sewermain, sewer laterals, and appurtenances.

3. T/o Barton – New Well & Booster Station:

Project involves the construction of a new well and booster pump station for the Town's water system. Project includes test well, one potable water well, site piping, pre-packaged booster pump station, chemical feed system, electrical service, telemetry, sitework and appurtenances.

4. V/o Candor – New Well:

Project involves the construction of a new potable water well for the Village. Well is needed to support economic development by supplying additional quantities of water where needed. Project includes test well, one new potable water well, 500 linear feet of watermain, chemical feed system with associated control building, electrical, telemetry from new well to water tank, and appurtenances.

5. V/o Candor – New Water Tank:

Project involves the construction of a new water tank for the Village to support economic development by storing additional quantities of water where needed. Project includes 250,000 gal. (size assumed) glass-fused-to-steel water storage tank, concrete foundation, 1,000 linear feet of watermain, concrete valve pit, and appurtenances. New tank is assumed to be located next to the existing tank.

6. V/o Candor – Water Meter & Billing Software:

Project involves the replacement of the Village's individual service water meters with new meters. The project includes 365 water meter replacements and replacement of the Village's meter reading equipment and billing software.

7. V/o Candor – Watermain Replacements:

Project involves the replacement and/or extension of watermains within the Village along Owego Street, Royal Street, and various locations in the Village with undersized and old mains. Project includes approx. 7,900 linear feet of watermain replacement and/or extension and appurtenances.

8. V/o Candor – Sewer System:

Project involves the creation of a sanitary sewer system to cover the entire Village. Project includes 120,000 gpd sewage treatment plant, 25,000 linear feet of sewermain, sewer laterals, and appurtenances.

9. V/o Newark Valley – Water Ext. to School & Belmont Bldgs:

Project involves extending the Village's watermain to the Senior High School on Wilson Creek Road to provide the school with public water (they are currently served by a private well). Project includes approximately 4,900 linear feet of watermain with appurtenances.

10. V/o Newark Valley – Water Upgrade to Fire Station:

Project involves the replacement of watermain near the Newark Valley fire station. The existing watermain does not provide adequate pressure at the station. The project includes replacement of approximately 2,000 linear feet of watermain along Rt. 38 with appurtenances.

11. V/o Newark Valley – Sewer System Creation:

Project involves the creation of a sanitary sewer system in the Village. Project includes 120,000 gpd sewage treatment plant, 32,000 linear feet of sewermain (to cover the entire Village), three pump stations, sewer laterals, and appurtenances.

12. V/o Newark Valley – Watermain & Hydrant Replacement:

Project involves the replacement of approximately 75% of the Village's watermain along with 67 fire hydrants, due to their age. Project includes watermain replacement (areas to be determined), fire hydrant replacement, site restoration, and appurtenances.

13. V/o Newark Valley – Reeves W.D. Watermain Replacement:

Project involves the replacement of watermain north of the Village that is undersized and buried too close to the ground surface (freezing concern). Project involves the replacement of approximately 3,000 linear feet of watermain, water services, and appurtenances.

14. V/o Newark Valley – Two New Reservoirs:

Project involves the replacement of the Village's existing reservoir with a new reservoir as well as construction of an additional reservoir west of the creek. Project includes two 400,000 gallon (size assumed) water storage tanks, new access road at each tank site, approximately 2,000 linear feet of new watermain, electrical, telemetry upgrades from the existing wells to the new tanks, and appurtenances.

15. V/o Newark Valley – Security at Well Sites:

PROJECT COMPLETED

16. V/o Nichols – Water System Ext. to Kirby Park:

Project involves the extension of the Village's water system to Kirby Park to attract more visitors to the park. Project includes 300 linear feet of watermain and appurtenances.

17. a) T/o Nichols – Sewermain Extension from Lounsberry to Kirby Park

Project involves the extension of public sewer from the Lounsberry sewage treatment plant in the Town of Nichols, along East River Road, to Kirby Park in the Village of Nichols (not including the Village). Project includes 22,500 linear feet of Sewermain (along East River Road), 130 new sewer services (residents along East River Road and Kirby Park), and an upgrade to the Lounsberry sewage treatment plant.

b) T/o Nichols – New Sewage Treatment Plant and Sewer Creation for V. of Nichols

Create a new sewer district to serve the Village of Nichols. Project includes 18,500 linear feet of sewermain, 219 sewer laterals (including Kirby Park), two sewage pump stations, and a 120,000 gpd sewage treatment plant. This project would not serve any residences along East River Road outside the Village limits.

c) T/o Nichols – New Sewage Treatment Plant and Sewer Creation for V. of Nichols and Tioga Park

Create a new sewer district to serve the Village of Nichols and Tioga Park. Project includes 35,100 linear feet of sewermain (18,500 feet in the Village and 16,600 feet from the Village to Tioga Park), 317 sewer laterals (218 in the Village, Kirby Park and 98 from the Village to Tioga Park), four sewage pump stations, and a 200,000 gpd sewage treatment plant. This project would not serve any residences along East River Road from the Village limits to Lounsberry.

18. United Water Nichols – Second Well:

Project involves the construction of a new potable water well for redundancy in case the Village's only functioning well becomes contaminated. Project includes test well, one potable water well, 1,000 linear feet of watermain, electrical, chemical feed system with building, telemetry from new well to existing water tank, and appurtenances.

19. a) T&V/o Nichols - Watermain Extension from Lounsberry to Kirby Park

Project involves the extension of public water from the Lounsberry water plant in the Town of Nichols, along East River Road, to Kirby Park in the Village of Nichols (not including the Village). Project includes 25,000 linear feet of watermain (along Stanton Hill Road and East River Road), 129 new water services (residents along East River Road).

b) T&V/o Nichols Watermain Extension from Lounsberry to V. of Nichols

Project involves the extension of public water from the Lounsberry water plant in the Town of Nichols, along East River Road, to the Village of Nichols (including Kirby Park). The existing well in the Village would be abandoned and the Village would buy water directly from the Town. Project includes 25,000 linear feet of watermain (along Stanton Hill Road and East River Road), 129 new water services (residents along East River Road), a meter pit (to meter and bill the water supplied to the Village), abandonment of the Village's water well, construction of a third potable water well for the Lounsberry water plant, and construction of a second water storage tank at the Lounsberry tank site.

c) T&V/o Nichols Watermain Extension from Lounsberry to V. of Nichols and Tioga Park

Project involves the extension of public water from the Lounsberry water plant in the Town of Nichols, along East River Road, to the Village of Nichols (including Kirby Park). Also extend public water from the Village of Nichols to Tioga Park. The existing well in the Village would be abandoned and the Village would buy water directly from the Town. Project includes 41,600 linear feet of watermain (25,000 feet along Stanton Hill Road and East River Road & 16,600 feet from the Village to Tioga Park), 228 new water services (residents along East River Road and from the Village to Tioga Park), a meter pit (to meter and bill the water

supplied to the Village), abandonment of the Village's water well, construction of two new potable water wells for the Lounsberry water plant, and construction of a second water storage tank at the Lounsberry tank site.

20. T/o Owego – Rt. 434 Water System (Hilton to Marshland):

Project involves extension of the Town's water system along Rte. 434 from Marshland Road to Hilton Road. Project includes 13,000 linear feet of watermain, water services, road restoration, and appurtenances.

21. T/o Owego – Rt. 434 Sewer System (Hilton to Marshland):

Project involves extension of the Town's sewer system along Rte. 434 from Marshland Road to Hilton Road. Project includes 13,000 linear feet of sewermain, sewer laterals, road restoration, and appurtenances.

22. T/o Owego – Reservoir Repairs:

Project involves the repair of the Town's water reservoirs, including Deerfield Road reservoir, Glann Road tanks, Dover Road reservoir, Ritchfield Road reservoir, and New Street reservoir, based on reservoir inspections performed by John Conrady. The project also involves the installation of emergency power at each reservoir site. Project includes various reservoir repairs, one emergency generator at each site, and appurtenances.

23. T/o Owego – Digester Covers:

Project involves the repair of the digester covers on the anaerobic digesters at the Town's wastewater treatment plant. The project also involves replacement of the gas mixing system in the digesters.

24. T/o Owego – Rt. 38 Industrial Park Well Modifications:

Project involves modifying the Rt. 38 industrial park well to increase growth at the park by increasing the amount of water supplied by the well. Project includes well investigation, new well pump and motor, new electrical service, and appurtenances.

25. T/o Owego – New Reservoir at Forest Hill:

Project involves the replacement of the Forest Hill Reservoir for the Town's water system. Project includes a new 500,000 gallon water storage tank (size assumed), 500 linear feet of watermain, electrical service, sitework, telemetry (from the Town's water source to the new tank), concrete valve pit, and appurtenances.

26. T/o Owego – Sewer Extension to Caferty Hill:

Project involves extension of the Town's sewer system along Caferty Hill Road to East Campville Road. Project includes approximately 11,000 linear feet of sewermain, sewer laterals, road restoration, and appurtenances.

27. T/o Owego – Water & Sewer Ext. to Day Hollow Road:

Project involves the extension of the Town's water & sewer system along Day Hollow Road from S.R 17C to Bodle Hill Road. Project includes 7,500 linear feet of watermain, 7,500 linear feet of sewermain, water services, sewer laterals, road restoration, and appurtenances.

28. T/o & V/o Owego & T/o Tioga – Rt. 96 Tie In Water & Sewer to Metro Site:

Project involves extension of water and sewer systems along Rt. 38 & Rt. 96 to enhance economic development along this corridor. Project includes 22,000 linear feet of watermain, 17,000 linear feet of sewermain, water services, sewer laterals, road restoration, and appurtenances.

29. V/o Owego – Sewer Replacement on Front St. (Paige to Draper):

Project involves the replacement of the sewermain (trunk sewer) along Front St. from Paige Street to Draper Park. Project includes 1,800 linear feet of sewermain, road restoration, sewer laterals, and appurtenances.

30. V/o Owego – New Bar Screen at Sewer Treatment Plant:

Project involves the replacement of the bar screen with a new mechanical bar screen at the Village's wastewater treatment plant to remove solids as they enter the plant in the sewage flow. Project includes removal of the old bar screen, replacement with new bar screen, electrical, and appurtenances.

31. United Water to Owego Interconnect – Watermain Extension from Dean Street to Metros:

Project involves the extension of the Village's water system along Route 38 from Dean Street to Turner's bridge. Project includes 2,950 linear feet of watermain, water services, road restoration, and appurtenances.

32. V/o Owego – Sewermain Upgrade for Owego Middle School:

Project involves upgrading the sewermain at the Owego Middle School on Elm Street in the Village. Increasing the size of the sewermain may help to increase the business development in the area. Project includes 900 linear feet of new sewermain, new pump station, electrical service, telemetry (from the new pump station to the wastewater treatment plant), and appurtenances.

33. V/o Owego – Holding Tank for Bathrooms at Fairgrounds:

Project involves construction of a holding tank at the fairgrounds to store sanitary sewage until the connection to the sewer system is completed. Project includes construction of an underground concrete holding tank, site piping, abandonment of the existing septic system, and appurtenances.

34. United Water Owego – Water Sys. Creation (Canawatee):

Project involves the construction of watermain in the Canawatee area of the Village of Owego (along Canal Street from Mill Street to West Front Street). The project includes 450 linear feet of watermain and appurtenances.

35. T/o Richford & T/o Berkshire – Water System:

Project involves the creation of a joint water system between the Towns of Richford and Berkshire. Project includes two potable water wells, one water storage tank (400,000 gal.), chemical feed system, 35,000 linear feet of watermain within the Towns and between the towns (linking the two towns as one system), water services, and appurtenances.

36. T/o Richford & T/o Berkshire – Sewer System:

Project involves the creation of two sanitary sewer systems (one for each town). The project includes two sewage treatment plants, 18,000 linear feet of sanitary sewer mains, one pump station, sewer laterals, and appurtenances.

37. V/o Spencer – Water System Creation:

Project involves the creation of a new water system in the Village. Project includes two potable water wells, one water storage tank (400,000 gal.), 57,000 linear feet of watermain (to cover the entire Village), one booster pump station, chemical feed system, emergency generator, water services, and appurtenances. Wells will be located near the Town line (Spencer-Van Etten). Watermain will be configured for possible future interconnection with Van Etten.

38. V/o Spencer – Sewer System Creation:

Project involves the creation of a new sanitary sewer system in the Village. Project includes 120,000 gpd sewage treatment plant, 48,000 linear feet of sewer main (to cover the entire Village), three pump stations, sewer laterals, and appurtenances.

39. T/o Tioga – Water System Upgrades:

Project involves the replacement and extension of the public water system along Glen Mary Drive from Talcott Street to Spaulding Hill Road. The existing watermain is undersized for flow and pressure and needs to be replaced with a larger diameter watermain. The watermain also needs to be extended past the Glen Mary Inn. Project includes 8,000 linear feet of watermain, water services, and appurtenances.

40. T/o Tioga – Sewer System Upgrades:

Project involves the creation of a public sewer system in the Town of Tioga. The system would convey wastewater to the existing sewage treatment plant near the school. The project includes approximately 14,000 linear feet of sewermain, one pump station, sewer laterals, and appurtenances.

41. V/o Waverly – Sewer I&I Limiting:

Project involves the Village taking steps to reduce infiltration and inflow in the Village's sewer system. Project includes preparation of a Sewer System Evaluation Study and 50,000 linear feet (amount dependent on results of study) of sewer lining.

42. V/o Waverly – Sludge Disposal:

Project involves dealing with the increasing problem of sludge disposal from the Village's wastewater treatment plant. The Village currently landfills the sludge from the plant but other alternatives are needed. Project includes a feasibility study for disposal alternatives.

43. V/o Waverly – Watermain Extensions:

Project involves extension of public water from the Village at the Broad Street Extension Bridge and from in front of the sewage treatment plant to the dog food plant. The project also involves replacement of watermain on Fulton Street, Lyman Avenue, Spring Street, and Garfield Street. Project includes 9,000 linear feet of watermain extension/replacement and appurtenances.

44. V/o Waverly – Dam Spillway Reconfiguration:

Project involves the reconfiguration of the dam spillway, which is part of the Village's surface water system. The spillway needs to be reconfigured to reduce turbidity in the lower reservoir and allow the sand filter to operate more efficiently.

45. V/o Waverly – 2 MG Reservoir:

Project involves the construction of a two million gallon water storage tank to add to the water storage capacity that the Village has. The Village currently supplies more water than it can store. The project includes construction of a new water storage tank next to the existing tank, concrete foundation, site piping (500 linear feet assumed), and appurtenances.

46. V/o Waverly – STP Chlorine Pump Upgrade:

Project involves upgrading the chlorine feed pumps at the sewage treatment plant in order to support the plant upgrade to 1.3 million gallons per day. The project includes replacement of the existing chlorine pumps with new larger pumps, chlorine feed piping, chemical feed tanks, and appurtenances.

47. County Wide Compost Facility:

Project involves creation of a compost facility for sludge disposal. The facility would be available for use by county sewage treatment plants. The project includes a feasibility study, land acquisition, construction of a static pile compost facility, purchase of equipment (aerator, front end loader, dump truck, etc.), and appurtenances.

Land Use and Environmental Constraints Ratings

Land Use & Economic Development

3 = Highly compatible with future land use and high potential for economic development

2 = Compatible with future land use and possible potential for economic development

1 = Not compatible with future land use and no potential for economic development

Environmental Constraints

3 = Few or no constraints (Most Compatible)

2 = Somewhat constrained (Somewhat Compatible)

1 = Highly constrained (Least Compatible)

#1 – Town of Barton - Water System Extension

- Land Use & Economic Development – 2 – this project is somewhat compatible with future land use and has some potential for economic development, half of the project is in a rural designated area
- Environmental Constraints – 2 – this project is somewhat constrained by steep slopes to the west and wetland to the east

#2 – Town of Barton - Sewer System Extension

- Land Use & Economic Development – 2 – this project is somewhat compatible with future land use and has some potential for economic development, half of the project is in a rural designated area
- Environmental Constraints – 2 – this project is somewhat constrained by steep slopes to the west and wetland to the east

#3 – Town of Barton - New Well and Booster Station

- Land Use & Economic Development – 3 – this project has a high potential for economic development, it is compatible with the future land use plan
- Environmental Constraints – 3 – environmental constraints are not a concern for this project

#4 – Village of Candor - New Well

- Land Use & Economic Development – 3 - a new well in the Village would be highly compatible with the future land use and creates potential for economic development
- Environmental Constraints – 3 - There are very few constraints in the Village

#5 – Village of Candor – New Water Tank

- Land Use & Economic Development – 3 - a new water tank in the Village would be highly compatible with the future land use and creates potential for economic development
- Environmental Constraints – 3 - There are very few environmental constraints in the Village

#6 – Village of Candor – Water Meter and Billing Software

- Land Use & Economic Development – NA - land use and economic development were not rated due to the nature of this project
- Environmental Constraints – NA – environmental constraints were not rated due to the nature of the project

#7 – Village of Candor – Watermain Replacements

- Land Use & Economic Development – 3 – the project is very compatible with the village land use and will encourage economic development in the Village
- Environmental Constraints – 2 – most of this project is unconstrained but there may be areas of replacement across Catatonk Creek and some of its wetlands

#8 – Village of Candor – Sewer System

- Land Use & Economic Development – 3 – Sanitary sewer creation is highly compatible with future land use and economic development in the Village
- Environmental Constraints – 2 – There may be river and wetland crossing with some of the sanitary sewer lines

#9 – Village of Newark Valley – Water Ext. to School & Belmont Bldgs.

- Land Use & Economic Development – 2 – This water extension project is compatible with the residential future land use but economic development is not high in a residential area
- Environmental Constraints – 3 – there are few environmental constraints in the project area

#10 – Village of Newark Valley – Water Upgrade to Fire Station

- Land Use & Economic Development – 2 – The future land use around the fire department is residential which does not have a high potential for economic development
- Environmental Constraints – 2 – The upgrades will disturb agricultural districts that reside around the fire department

#11 – Village of Newark Valley – Sewer System Creation

- Land Use & Economic Development – 3 – The project is highly compatible with the village land use and has a high economic development potential for the Village
- Environmental Constraints – 3 – There are very few constraints that will be encountered with this project, the crossing of the 100 year floodplain with sewer lines is minimal

#12 – Village of Newark Valley – Watermain and Hydrant Replacement

- Land Use & Economic Development – 3 – The project is highly compatible with the village land use and will create a high economic development potential for the Village

- Environmental Constraints – 3 – There are very few constraints that will be encountered with this project, there may be crossing of the 100 year floodplain

#13 – Village of Newark Valley – Reeves W.D. Watermain Replacement

- Land Use & Economic Development – 2 – This project is somewhat compatible with future land use, some of the project is in a rural area. The project is mostly in a residential area so there is only a slight potential for economic development
- Environmental Constraints – 3 – there are no environmental constraints in this project area

#14 – Village of Newark Valley – Two New Reservoirs

- Land Use & Economic Development – 3 – two new reservoirs could potentially increase the economic development and they are compatible with the village land use
- Environmental Constraints – 3 – the reservoirs will be placed in areas that are not environmentally constrained

#15 – Village of Newark Valley Security at Well Sites

PROJECT COMPLETED

#16 – Village of Nichols – Water System Extension to Kirby Park

- Land Use & Economic Development – 3 – This project is compatible with the future land use plan and there is a high potential for economic development in the area
- Environmental Constraints – 3 – The area in which the water system would be created is not environmentally constrained

#17a – T. of Nichols - Sewermain Extension from Lounsberry to Kirby Park

- Land Use & Economic Development – 2 – The project is compatible with future land use and there will be some potential for economic development.
- Environmental Constraints – 2 – the project will potentially disturb agricultural districts and wetlands.

#17b – V. of Nichols - New Sewage Treatment Plant and Sewer Creation for V. of Nichols

- Land Use & Economic Development – 3 – This project is compatible with the future land use plan and there is a high potential for economic development in the area
- Environmental Constraints – 3 – The area in which the project is proposed is not environmentally constrained

#17c – V. of Nichols – New Sewage Treatment Plant and Sewer Creation for V. of Nichols and Tioga Park

- Land Use & Economic Development – 3 – This project is compatible with the future land use plan and there is a high potential for economic development in the area
- Environmental Constraints – 2 – the project will potentially disturb agricultural districts and wetlands.

#18 – United Water Nichols – Second Well

- Land Use & Economic Development – 3 – Project is compatible with the future land use plan and has potential to create economic development opportunities
- Environmental Constraints – 3- the well will be placed free of environmental constraints

#19a – T. of Nichols - Watermain Extension from Lounsberry to Kirby Park

- Land Use & Economic Development – 2 – The project is compatible with future land use and there will be some potential for economic development along this corridor.
- Environmental Constraints – 2 – the project will potentially disturb agricultural districts and wetlands.

#19b – T. of Nichols - Watermain Extension from Lounsberry to V. of Nichols

- Land Use & Economic Development – 3 – This project is compatible with the future land use plan and there is a high potential for economic development in the area
- Environmental Constraints – 2 – the project will potentially disturb agricultural districts and wetlands.

#19c – T. of Nichols - Watermain Extension from Lounsberry to V. of Nichols and Tioga Park

- Land Use & Economic Development – 3 – This project is compatible with the future land use plan and there is a high potential for economic development in the area
- Environmental Constraints – 2 – the project will potentially disturb agricultural districts and wetlands.

#20 – Town of Owego – Rt. 434 Water System (Hilton to Marshland)

- Land Use & Economic Development – 3 - This project is compatible with the commercial and residential land uses in the future land use plan and there is a potential for economic development in the area
- Environmental Constraints – 2 – The area is somewhat constrained by wetlands, floodplains, and two parcels of agricultural district but has large continuous pockets of developable land

#21 – Town of Owego – Rt. 434 Sewer System (Hilton to Marshland)

- Land Use & Economic Development – 3 - This project is compatible with the commercial and residential land uses in the future land use plan and there is a potential for economic development in the area

- Environmental Constraints – 2 – The area is somewhat constrained by wetlands, floodplains, and two parcels of agricultural district but has large continuous pockets of developable land

#22 – Town of Owego – Reservoir Repairs

- Land Use & Economic Development – NA – the reservoir repairs are not rated for land use and economic development due to the nature of the project
- Environmental Constraints – NA – This project is not rated because it consists of repairing existing reservoirs

#23 – Town of Owego - Digester Covers

- Land Use & Economic Development – NA - land use and economic development were not rated due to the nature of this project
- Environmental Constraints – NA – environmental constraints were not rated due to the nature of the project

#24 – Town of Owego – Rt. 38 Industrial Park Well Modifications

- Land Use & Economic Development – 3 – This project is compatible with the land use and the modifications will increase the potential for economic development in the industrial park
- Environmental Constraints – 3 – modifications to the existing well are not environmentally constrained

#25 – Town of Owego – New Reservoir at Forest Hill

- Land Use & Economic Development – 2 – The reservoir replacement is compatible with the surrounding land uses (residential, commercial, village) and will create some economic development
- Environmental Constraints – 3 – the new reservoir will be place near the old one, there are no environmental constraints

#26 – Town of Owego – Sewer Extension to Caferty Hill

- Land Use & Economic Development – 2 - This project is compatible with the residential land use in the future land use plan but the economic development potential in a residential area is low
- Environmental Constraints – 3 – There are very few environmental constraints in the project area

#27 – Town of Owego – Water & Sewer Extension to Day Hollow Rd

- Land Use & Economic Development – 3 – the infrastructure extension is compatible with the commercial and residential land uses and there is a high economic development potential
- Environmental Constraints – 3 – There are very few environmental constraints that this project will encounter, only a few small wetlands along Day Hollow Rd

#28 – T./V. of Owego & T. of Tioga – Rt. 96 Tie in Water and Sewer to Metro Site

- Land Use & Economic Development – 2 – the project is compatible with the various surrounding land uses, there is some economic development potential
- Environmental Constraints – 2 – the project site is constrained by wetlands, floodplain, and agricultural districts but there are pockets of developable land

#29 – Village of Owego – Sewer Replacement on Front St. (Paige to Draper)

- Land Use & Economic Development – 3 - This project is highly compatible with the central business future land use classification, the economic development potential is high in this area
- Environmental Constraints – 2 - the project lies entirely within the 100-year flood plain but this is not critical because of the existing build-out in the Village

#30 – Village of Owego – New Bar Screen at Sewer Treatment Plant

- Land Use & Economic Development – NA - land use was not rated due to the nature of this project
- Environmental Constraints – NA – environmental constraints were not rated due to the nature of the project

#31 – United Water to Owego Interconnect – Watermain Extension from Dean Street to Metros

- Land Use & Economic Development – 3 - This project is highly compatible with the Village classification in the land use plan and there is a high potential for economic development in the Village
- Environmental Constraints – 3 – There is steep slope to the east of North Avenue (Route 38) in the Village but there is no other environmental constraints on the other developable lands

#32 – Village of Owego – Sewermain Upgrade for Owego Middle School

- Land Use & Economic Development – 3 – this upgrade will provide better service and has a potential to increase economic development in the area, the project is compatible with the village land use
- Environmental Constraints – 3 – the project is in a 100 year floodplain but it is the replacement of existing infrastructure and not new to the environment

#33 – Village of Owego – Holding Tank for Bathrooms at Fairgrounds

- Land Use & Economic Development – NA - land use was not rated due to the nature of this project
- Environmental Constraints – NA – environmental constraints were not rated due to the nature of the project

#34 – United Water Owego – Water System Creation (Canawatee)

- Land Use & Economic Development – 3 - the project is compatible with the village land use and has some potential to create economic development
- Environmental Constraints – 2 – the project is somewhat constrained by being in the 100 year floodplain

#35 – Towns of Richford & Berkshire – Water System

- Land Use & Economic Development – 2 – a water system is compatible with the village and residential future land uses but not the rural area between Richford and Berkshire, there is somewhat of an economic development potential in the village classified future land use areas
- Environmental Constraints – 2 – environmental constraints such as wetlands, agricultural districts, and floodplains exist in the project area but there are pockets of developable land

#36 – Towns of Richford & Berkshire – Sewer System

- Land Use & Economic Development – 3 – This project is compatible with the Village classifications of the Richford and Berkshire hamlets in the future land use plan and there is potential for economic development in these areas
- Environmental Constraints – 3 – there are agricultural districts close to these hamlets but no other constraints exist in these areas

#37 – Village of Spencer – Water System Creation

- Land Use & Economic Development – 3 – This project is compatible with the future land use plan for the Village of Spencer and the economic development potential is high
- Environmental Constraints – 2 – There are wetlands in the southern end of the Village, the rest of the Village has little or no constraints

#38 – Village of Spencer – Sewer System Creation

- Land Use & Economic Development – 3 – This project is compatible with the future land use plan for the Village of Spencer and the economic development potential is high
- Environmental Constraints – 2 – There are wetlands in the southern end of the Village, the rest of the Village has little or no constraints

#39 – Town of Tioga – Water System Upgrades

- Land Use & Economic Development – 2 – the project is compatible with the residential future land use but has little economic development potential
- Environmental Constraints – 3 – there are very few environmental constraints for this project

#40 – Town of Tioga – Sewer System Upgrades

- Land Use & Economic Development – 3 – this project would create a high potential for economic development in the village future land use setting
- Environmental Constraints – 2 – floodplain, wetlands, and agricultural districts each play a role in constraining this project

#41 – Village of Waverly – Sewer I&I Limiting

- Land Use & Economic Development – 3 – utilizing sewer lining will increase the efficiency of the system – this creates an economic development potential.
- Environmental Constraints – 3 – no environmental constraints exist

#42 – Village of Waverly – Sludge Disposal

- Land Use & Economic Development – 2 – a feasibility study for sludge disposal has a potential to create economic development
- Environmental Constraints – NA - this project is not rated due to the nature of the project

#43 – Village of Waverly – Watermain Extensions

- Land Use & Economic Development – 3 – this project is compatible with the commercial future land use and has a high potential to create economic development
- Environmental Constraints – 3 – there are very few environmental constraints

#44 – Village of Waverly – Dam Spillway Reconfiguration

- Land Use & Economic Development – 3 – reconfiguration of the spillway will increase the efficiency of the system, there is a potential for an increase in economic development
- Environmental Constraints – 2 – there will be environmental constraints working with the spillway

#45 – Village of Waverly – 2 MG Reservoir

- Land Use & Economic Development – 3 – this project is highly compatible with the village land use and the economic development potential is high
- Environmental Constraints – 3 – there are few environmental constraints in the Village

#46 – Village of Waverly – STP Chlorine Pump Upgrade

- Land Use & Economic Development – 3 – project is compatible with future land use and has the possibility of high economic development potential
- Environmental Constraints – NA – environmental constraints were not rated due to the nature of the project

#47 – County Wide Compost Facility

- Land Use & Economic Development – NA – not rated due to nature of the project
- Environmental Constraints – NA – location for the compost facility has not yet been decided. When a location is decided these criteria can be rated. This project would have the potential to create economic development, but could be environmentally constrained due to the nature of the project

Tioga County Infrastructure Project Ranking Matrix

Including Economic Cost

Project #	Project Descriptions	Project Cost	EDU's Served	Cost / EDU*	Health and Safety		Economic Cost		Municipal Administration		Land Use & Economic Dev.		Environmental Constraints		Total	Weighted Average
					Weighted Feasibility ()	Weighted Feasibility ()	Weighted Feasibility ()	Weighted Feasibility ()	Weighted Feasibility ()	Weighted Feasibility ()						
1	T. of Barton - Water System Extension	\$1.7M	80	\$21,000												
2	T. of Barton - Sewer System Extension	\$2.5M	80	\$31,000												
3	T. of Barton - New Well and Booster Station	\$746K	150	\$5,000												
4	V. of Candor - New Well	\$739K	400	\$2,000												
5	V. of Candor - New Water Tank	\$823K	400	\$2,000												
6	V. of Candor - Water Meter & Billing Software Replacement	\$216K	373	\$1,000												
7	V. of Candor - Watermain Replacements	\$1.2M	300	\$4,000												
8	V. of Candor - Sewer System	\$92M	400	\$23,000												
9	V. of Newark Valley - Water Extension to School & Belmont Billings	\$851K	35	\$8,000												
10	V. of Newark Valley - Water Upgrade to Fire Station	\$284K	35	\$8,000												
11	V. of Newark Valley - Sewer System Creation	\$10.4M	425	\$24,000												
12	V. of Newark Valley - Watermain & Hydrant Replacement	\$3.3M	255	\$11,000												
13	V. of Newark Valley - Reeves WD Watermain Replacement	\$399K	20	\$20,000												
14	V. of Newark Valley - Two New Reservoirs	\$92M	425	\$5,000												
15	V. of Newark Valley - Security at Well Sites - PROJECT COMPLETED	\$87K	425	\$200												
16	V. of Nichols - Water System Extension to Kirby Park	\$36K	5	\$7,000												
17a	T. of Nichols Sewer Extension - Lounsberry to Kirby Park	\$7.2M	134	\$54,000												
17b	V. of Nichols - New Plant and Sewer Creation in Village	\$8.9M	223	\$40,000												
17c	V. of Nichols - New Plant and Sewer Creation in Village and to Tioga Park	\$14.1M	343	\$41,000												
18	United Water Nichols - Second Well	\$497K	225	\$2,000												
19a	T. of Nichols Waterline Extension - Lounsberry to Kirby Park	\$3.6M	134	\$27,000												
19b	T. of Nichols Waterline Extension - Lounsberry to Village of Nichols	\$3.8M	352	\$11,000												
19c	T. of Nichols Waterline Extension - Lounsberry to Village of Nichols and Tioga Park	\$6.3M	472	\$13K												
20	T. of Owego - Rt. 434 Water System (Hilton to Marshland)	\$1.7M	40	\$43,000												
21	T. of Owego - Rt. 434 Sewer System (Hilton to Marshland)	\$2.9M	40	\$73,000												
22	T. of Owego - Reservoir Repairs	\$1.7M	2400	\$700												
23	T. of Owego - Digester Covers	\$1.4M	2550	\$800												
24	T. of Owego - Rt. 38 Industrial Park Well Modifications	\$101K	50	\$2,000												
25	T. of Owego - New Reservoir at Forest Hill	\$1.3M	1200	\$1,000												
26	T. of Owego - Sewer Extension to Calferty Hill	\$2.5M	60	\$42,000												

Tioga County Infrastructure Project Ranking Matrix

Project Number is for Identification Purposes Only	Project Description	Project Costs and EDUs Served are Estimated	Including Economic Cost										3	3	3	3	3		
			1	2	3	4	5	6	7	8	9	10							
27	T. of Owego - Water & Sewer Extension to Day Hollow Rd.	\$2.6M	40	\$65,000															
28	T/V. of Owego & T. of Tioga - Rt. 96 Tie in Water and Sewer to Metro Site	\$8.4M	90	\$107,000															
29	V. of Owego - Sewer Replacement on Front Street - Paige to Draper	\$566K	40	\$14,000															
30	V. of Owego - New Bar Screen at Sewer Treatment Plant	\$50K	1700	\$30															
31	United Water to Owego Interconnect - Watermain Extension from Dean Street to Metros	\$384K	25	\$15,000															
32	V. of Owego - Sewermain Upgrade for Owego Middle School	\$409K	25	\$16,000															
33	V. of Owego - Holding Tank for Bathrooms @ Fairgrounds	\$101K	4	\$25,000															
34	United Water Owego - Water System Creation (Canawaque)	\$59K	4	\$15,000															
35	T. of Richford & Berkshire - Water System	\$6.4M	175	\$37,000															
36	T. of Richford & Berkshire - Sewer System	\$10.2M	100	\$80,000															
37	V. of Spencer - Water System Creation	\$9.6M	350	\$27,000															
38	V. of Spencer - Sewer System Upgrades	\$13.2M	300	\$4,000															
39	T. of Tioga - Water System Upgrades	\$1.1M	100	\$11,000															
40	T. of Tioga - Sewer System Upgrades	\$3.1M	100	\$31,000															
41	V. of Waverly - Sewer I&I liming	\$4.9M	1900	\$3,000															
42	V. of Waverly - Sludge Disposal	\$25K	1900	\$10															
43	V. of Waverly - Watermain Extensions	\$1.4M	250	\$6,000															
44	V. of Waverly - Dam Spillway Reconfiguration	\$1.5M	1900	\$1,000															
45	V. of Waverly - 2 MG Reservoir	\$3.2M	1900	\$2,000															
46	V. of Waverly - STP Chlorine Pump Upgrade	\$20K	1900	\$10															
47	County Wide Compost Facility	\$955K	6000	\$160															

Please rate each of the five criteria from 1 to 3 (1 = Least Probable (or least need), 3 = Most Probable (or most need)). Place NA in box if criteria is not applicable to that specific project (See examples on procedure handout).

These criteria have been pre-rated using a rating from 1-3 (1 = Least Compatible, 3 = Most Compatible)



* Cost per EDU includes only estimated project cost. It does not include loan interest or operation & maintenance expenses.

Tioga County Infrastructure Project Ranking Matrix

Excluding Economic Cost

Project #	Project Descriptions	Health and Safety		Municipal Administration		Land Use & Economic Dev.		Environmental Constraints		Total	Weighted Average
		Weighted Feasibility ()		Weighted Feasibility ()		Weighted Feasibility ()		Weighted Feasibility ()			
1	T. of Barton - Water System Extension					2		2			
2	T. of Barton - Sewer System Extension					2		2			
3	T. of Barton - New Well and Booster Station					3		3			
4	V. of Candor - New Well					3		3			
5	V. of Candor - New Water Tank					3		3			
6	V. of Candor - Water Meter & Billing Software Replacement					NA		NA			
7	V. of Candor - Watermain Replacements					3		2			
8	V. of Candor - Sewer System					3		3			
9	V. of Newark Valley - Water Extension to School & Belmont Billings					2		2			
10	V. of Newark Valley - Water Upgrade to Fire Station					2		2			
11	V. of Newark Valley - Sewer System Creation					3		3			
12	V. of Newark Valley - Watermain & Hydrant Replacement					3		3			
13	V. of Newark Valley - Reeves WD Watermain Replacement					2		3			
14	V. of Newark Valley - Two New Reservoirs					2		3			
15	V. of Newark Valley - Security at Wall Street PROJECT COMPLETED					NA		NA			
16	V. of Nichols - Water System Extension to Kirby Park					3		3			
17a	T. of Nichols Sewer Extension - Lounsberry to Kirby Park					2		2			
17b	V. of Nichols - New Plant and Sewer Creation in Village					3		3			
17c	V. of Nichols - New Plant and Sewer Creation in Village and to Tioga Park					3		2			
18	United Water Nichols - Second Well					3		3			
19a	T. of Nichols Waterline Extension - Lounsberry to Kirby Park					3		3			
19b	T. of Nichols Waterline Extension - Lounsberry to Village of Nichols					2		2			
19c	T. of Nichols Waterline Extension - Lounsberry to Village of Nichols and Tioga Park					3		2			
20	T. of Owego - Rt. 434 Water System (Hilton to Marshland)					3		2			
21	T. of Owego - Rt. 434 Sewer System (Hilton to Marshland)					3		2			
22	T. of Owego - Reservoir Repairs					NA		NA			
23	T. of Owego - Digester Covers					NA		NA			
24	T. of Owego - Rt. 38 Industrial Park Well Modifications					3		3			

Tioga County Infrastructure Project Ranking Matrix

Project Number is for Identification Purposes Only	Project Description	Excluding Economic Cost					Please rate each of the five criteria from 1 to 3 (1 = Least Probable (or least need), 3 = Most Probable (or most need), Place NA in box if criteria is not applicable to that specific project (See examples on procedure handout).	These criteria have been pre-rated using a rating from 1-3 (1 = Least Compatible, 3 = Most Compatible)	CHA
		1	2	3	4	5			
25	T. of Owego - New Reservoir at Forest Hill						2		
26	T. of Owego - Sewer Extension to Cattery Hill						2		
27	T. of Owego - Water & Sewer Extension to Day Hollow Rd.						3		
28	T/V. of Owego & T. of Tioga - Rt. 96 Tie in Water and Sewer to Metro Site						2		
29	V. of Owego - Sewer Replacement on Front Street - Paige to Draper						3		
30	V. of Owego - New Bar Screen at Sewer Treatment Plant						NA		
31	United Water to Owego Interconnect - Watermain Extension from Dean Street to Metros						3		
32	V. of Owego - Sewermain Upgrade for Owego Middle School						3		
33	V. of Owego - Holding Tank for Bathrooms @ Fairgrounds						NA		
34	United Water Owego - Water System Creation (Canawance)						3		
35	T. of Richford & Berkshire - Water System						2		
36	T. of Richford & Berkshire - Sewer System						3		
37	V. of Spencer - Water System Creation						3		
38	V. of Spencer - Sewer System Creation						3		
39	T. of Tioga - Water System Upgrades						2		
40	T. of Tioga - Sewer System Upgrades						3		
41	V. of Waverly - Sewer I&I Limiting						3		
42	V. of Waverly - Sludge Disposal						2		
43	V. of Waverly - Watermain Extensions						3		
44	V. of Waverly - Dam Spillway Reconfiguration						3		
45	V. of Waverly - 2 MG Reservoir						3		
46	V. of Waverly - STP Chlorine Pump Upgrade						3		
47	County Wide Compost Facility						NA		

SURVEY SUMMARY

Priority	Project Name	Project #	Project Cost	Rating W/Cost	Rating W/O Cost	Average Rating	Ranking
High Priority	United Water Nichols - Second Well **	18	\$497k	8.365	6.956	7.660	1
	V. of Waverly - 2 MG Reservoir	45	\$3.2M	8.329	6.897	7.613	2
	V. of Newark Valley - Two New Reservoirs	14	\$2.2M	7.835	6.544	7.190	3
	T. of Barton - New Well and Booster Station	3	\$746k	7.882	6.485	7.184	4
	T. of Nichols Waterline Extension - Lounsberry to Village of Nichols **	19b	\$3.8M	7.751	6.489	7.120	5
	V. of Candor - New Well	4	\$739k	7.706	6.456	7.081	6
	County Wide Compost Facility	47	\$955k	8.176	5.971	7.074	7
	V. of Newark Valley - Watermain & Hydrant Replacement	12	\$3.3M	7.471	6.544	7.007	8
	V. of Waverly - Watermain Extensions	43	\$1.4M	7.718	6.294	7.006	9
	V. of Candor - Sewer System	8	\$9.2M	7.282	6.676	6.979	10
	V. of Waverly - Sludge Disposal	42	\$25k	7.912	5.922	6.917	11
	T. of Owego - Rt. 38 Industrial Park Well Modifications	24	\$101k	7.565	6.221	6.893	12
	V. of Nichols - New Plant and Sewer Creation in Village **	17b	\$8.9M	7.188	6.505	6.847	13
	V. of Waverly - Dam Spillway Reconfiguration	44	\$1.5M	7.616	6.059	6.837	14
	V. of Newark Valley - Sewer System Creation	11	\$10.4M	7.188	6.471	6.829	15
Medium Priority	V. of Candor - New Water Tank	5	\$623k	7.306	6.088	6.697	16
	V. of Spencer - Water System Creation	37	\$9.6M	6.965	6.368	6.666	17
	V. of Owego - Sewermain Upgrade for Owego Middle School	32	\$409k	6.953	6.221	6.587	18
	United Water to Owego Interconnect - Watermain Extension from Dean Street to Metros	31	\$384k	6.841	6.324	6.582	19
	T. of Nichols Waterline Extension - Lounsberry to Village of Nichols and Tioga Park **	19c	\$6.3M	7.167	5.975	6.571	20
	V. of Candor - Watermain Replacements	7	\$1.2M	7.141	5.956	6.549	21
	T. of Richford & Berkshire - Sewer System	36	\$10.2M	6.682	6.412	6.547	22
	V. of Nichols - Water System Extension to Kirby Park	16	\$36k	7.071	5.926	6.499	23
	T. of Owego - Water & Sewer Extension to Day Hollow Rd.	27	\$2.6M	6.765	6.137	6.451	24
	V. of Spencer - Sewer System Creation	38	\$13.2M	6.659	6.162	6.410	25
	T. of Owego - New Reservoir at Forest Hill	25	\$1.3M	6.965	5.544	6.254	26
	United Water Owego - Water System Creation (Canawance)	34	\$59k	6.447	5.853	6.150	27
	V. of Nichols - New Plant and Sewer Creation in Village and to Tioga Park **	17c	\$14.1M	6.396	5.692	6.044	28
	T. of Tioga - Sewer System Upgrades	40	\$3.1M	6.294	5.676	5.985	29
Low Priority	T. of Owego - Rt. 434 Water System (Hilton to Marshland)	20	\$1.7M	6.235	5.721	5.978	30
	T. of Tioga - Water System Upgrades	39	\$1.1M	6.365	5.471	5.918	31
	V. of Newark Valley - Reeves WD Watermain Replacement	13	\$399k	6.306	5.382	5.844	32
	T. of Richford & Berkshire - Water System	35	\$6.4M	6.035	5.500	5.768	33
	V. of Newark Valley - Water Extension to School & Belmont Billings	9	\$651k	6.153	5.353	5.753	34
	T. of Owego - Rt. 434 Sewer System (Hilton to Marshland)	21	\$2.9M	5.976	5.500	5.738	35
	T. of Owego - Sewer Extension to Caferty Hill	26	\$2.5M	5.847	5.485	5.666	36
	T. of Barton - Water System Extension	1	\$1.7M	5.976	5.176	5.576	37
	T/V. of Owego & T. of Tioga - Rt. 96 Tie in Water and Sewer to Metro Site	28	\$6.4M	5.671	5.103	5.387	38
	V. of Candor - Water Meter & Billing Software Replacement	6	\$216k	6.225	4.353	5.289	39
	V. of Newark Valley - Water Upgrade to Fire Station	10	\$284k	5.894	4.676	5.285	40
	T. of Barton - Sewer System Extension	2	\$2.5M	5.553	4.971	5.262	41
	T. of Nichols Waterline Extension - Lounsberry to Kirby Park **	19a	\$3.6M	5.409	4.911	5.160	42
	T. of Nichols Sewer Extension - Lounsberry to Kirby Park **	17a	\$7.2M	5.442	4.875	5.159	43

** = Mutually Exclusive Projects

The Summary Survey Table presented above ranks each of the proposed projects between one (1) and forty-three (43) and classifies them as either "high," "medium," or "low" priority. The Steering Committee rated each project based on a variety of criteria to determine its rank. The Committee provided two rating scores for each project. The first score rated the project without cost as a factor and the second score rated the project considering its cost. The two rated scores were averaged to determine the project's overall rank; the higher the score the better the rank. During the rating process, eight (8) projects were removed from the Survey presented above. The wellhead security project for the Village of Newark Valley was completed during the preparation of the Infrastructure Master Plan, and thus was removed from the list. The other projects were relocated to another Table found on the following page because the Steering Committee later identified them as "maintenance" projects that are at a level of detail that is beyond the scope of the Infrastructure Master Plan.

Tioga County Maintenance Projects

Project Name	Project #	Project Cost	Rating W/Cost	Rating W/O Cost	Average Rating
V. of Waverly - STP Chlorine Pump Upgrade	46	\$20k	8.32	6.69	7.50
T. of Owego - Reservoir Repairs (Currently underway at this time)	22	\$1.7M	8.59	6.15	7.37
V. of Waverly - Sewer I&I limiting	41	\$4.9M	7.93	6.60	7.27
V. of Owego - Sewer Replacement on Front Street - Paige to Draper	29	\$566k	7.15	6.03	6.59
V. of Owego - New Bar Screen at Sewer Treatment Plant	30	\$50k	7.57	5.35	6.46
T. of Owego - Digester Covers	23	\$1.4M	7.24	5.32	6.28
V. of Owego - Holding Tank for Bathrooms @ Fairgrounds	33	\$101k	5.48	5.13	5.30