

ECONOMIC DEVELOPMENT STRATEGY

ALBANY COUNTY, NY

VOLUME 1: EXECUTIVE SUMMARY REPORT

2020

PREPARED BY:



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Camoin 310 has provided economic development consulting services to municipalities, economic development agencies, and private enterprises since 1999. Through the services offered, Camoin 310 has had the opportunity to serve EDOs and local and state governments from Maine to California; corporations and organizations that include Lowes Home Improvement, FedEx, Amazon, Volvo (Nova Bus) and the New York Islanders; as well as private developers proposing projects in excess of \$6 billion. Our reputation for detailed, place-specific, and accurate analysis has led to projects in over 40 states and garnered attention from national media outlets including Marketplace (NPR), Forbes magazine, The New York Times, and The Wall Street Journal. Additionally, our marketing strategies have helped our clients gain both national and local media coverage for their projects in order to build public support and leverage additional funding. We are based in Saratoga Springs, NY, with regional offices in Portland, ME; Boston, MA; Richmond, VA and Brattleboro, VT. To learn more about our experience and projects in all of our service lines, please visit our website at www.camoinassociates.com.

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EXECUTIVE SUMMARY

As the home of the State Capital, a state-of-the-art healthcare system, and world class educational institutions, Albany County benefits from a stable, consistent economic base. Yet, the challenges that exist include the county's ability to attract professional talent and retain young people to support future economic growth, a lack of strong identity and overall negative image, aging infrastructure, and a disconnected economic development system lacking strong leadership and clear, well-defined roles and responsibilities. These challenges place Albany County at a disadvantage for attracting private investment, business and talent attraction, along with retaining businesses within the county.

This Strategic Plan is designed to enhance quality of life and accelerate economic growth throughout Albany County. Projects and initiatives are organized around four goal areas:

1. Fill the Gaps & Align Regional Resources

The Capital Region is rich in resources to support business growth, but within Albany County there is fragmentation with delivery of services and resources in the economic development ecosystem. County government has an important role to play in better leveraging the potential of existing collaborative relationships and providing leadership to advance business-friendly initiatives. In addition to developing an economic agenda for County leaders to follow, there is also need for an organization that can respond quickly to economic opportunities and threats and is shielded from political influences to execute the transformative changes of that agenda throughout communities within the county. Specifically, this strategic plan calls for the establishment of a local development corporation that has strong representation from private sector interests.

2. Target Investments Around Catalytic Projects and Critical Infrastructure

A Comprehensive Plan is needed for Albany County. This plan would define a unified vision, inventory existing land uses and public infrastructure assets, create a transparent framework for land-use decisions, foster economic growth, and ensure future sustainable development and strategically targeted investments.

3. Nurture, Retain, and Attract Top Talent Around Growth Sectors

The third goal contains strategies to draw attention to and build a workforce development pipeline for key growth sectors: Cybersecurity, FinTech, & InsureTech and Advanced Transportation and Logistics.

4. Transform Albany County's Image

Transforming Albany County's image includes projects and initiatives designed to counter perceptions of old-school approaches and establish Albany County as the place for a) major athletic events and learning programs that showcase women in business, competition, and politics; b) become known as a clean energy hub; and, c) create excitement for business and entrepreneurship in the county.

This is a bold plan for Albany County. The four areas of emphasis are dependent upon each other and will produce success if executed seamlessly, both within the corridors of County government and with external partners.

What does success look like?

Success for Albany County is to create a business-friendly environment that encourages new investment and establishes the county as a magnet for talent and investment. It also involves environmentally sensitive, pedestrian-friendly new development that is designed to bring people together and help forge more vibrant, inclusive and open communities. The tipping point will be felt when Albany County becomes the 'need to be' and 'want to be' location for companies to locate and workers and residents to prosper.

To help make that happen, every project and initiative within the four goal areas of this Plan has been vetted against a set of guiding principles that were developed at the onset of the planning process. These principles help focus development of the strategy, and include:

- **Make quality and sense of place central**
- **Ensure equity and inclusiveness**
- **Practice business-friendly messaging**
- **Collaborate. Collaborate. Collaborate.**

WHY THIS STRATEGY WAS DEVELOPED

Seven of the eight counties in the Capital Region of New York State have a go-to public or quasi-public organization that is responsible for coalescing leadership to create economic opportunities, attract and retain businesses, generate new revenue, and diversify the county's tax base. Albany County stands apart. It relies on a loose network of local municipalities and regional organizations that conduct some but not all core economic development functions. They do their work without having a strong public or private champion to advocate on their behalf at the countywide level or to help leverage regional resources and build broader partnerships.

With limited direct participation from County officials, a few local municipalities have learned how to pull together resources and build capacity in some parts of the county while gaps widen in other areas. At the regional level, the County has benefited from its location at the center of an eight county Capital Region, where regional organizations act on behalf of all counties. Compared to its neighboring counties, at the start of 2020, Albany County appeared to be performing well. Its median household income was comparable to that of the region and state and well above the U.S. median. By virtue of higher education institutions and state government presence within its jurisdiction, it has residents who have high levels of educational attainment.

On closer examination, however, while the region appeared strong on several measures of economic health, Albany County lagged in important areas compared to its neighboring jurisdictions and benchmarked competitors. Median household income over the next five years is projected to be slower than the region, state and the U.S. median incomes. Population growth, while comparatively higher than most of Upstate and New York State, continues to lag U.S. growth by wide margins. While the county added the same number of jobs as the region from 2008 to 2018 (2%), it lagged dramatically behind the state (8%) and nation (7%).

Albany County is inextricably linked to State government, although that fact does not need to restrict its economic growth. Capital cities and counties are unique economic environments due to a guaranteed government presence. They therefore cannot be comparably benchmarked against non-capital cities/counties. Most have strong universities, major health care centers, and widely available professional services, and yet, some capital cities/counties in the U.S. have done a better job of building on their entrenched public sector base than others. The more successful capital cities/counties have managed to diversify their economies to a greater degree and leverage educational assets to become more than just centers of government. As this happens, the percent of the population living at or below poverty has declined. Several now are meccas for art, culture, food, or entertainment, and boast very high standards for quality of life that attract global talent and resources.

When contrasted with other comparable capital cities/counties in the nation of relative size and similar base characteristics, Albany County has a higher percentage of government jobs and percent of its population living in poverty.



Just next door . . .

The Schenectady Metroplex Development Authority is a New York State public benefit corporation.

Its mission is to “enhance the long-term economic and social vitality as well as overall quality of life in Schenectady County through comprehensive, coordinated program of economic development within the Metroplex service district with particular emphasis on downtown Schenectady.” The service district activities are concentrated along the Route 5 and Route 7 corridors, especially in the downtown.

Per enabling statute, the Authority may “design, plan, finance, site, construct, administer, operate, manage, and maintain facilities within its service district.” This includes incentivizing projects and leveraging investments, conducting site assembly, and providing technical assistance among other core economic development functions.

2018 Results

- **96** project announcements
- **\$275** million new investments
- **600** new jobs

Figure 2: Benchmark Counties by Highest Percent Government Jobs & Poverty

Benchmark Counties by Highest Percent Government Jobs & Poverty					
Capital City	County	Government Jobs	Total Jobs	Percent Government	Percent Population in Poverty
Columbia, South Carolina	Richland	68,610	254,233	27.0%	25.3%
Albany, New York	Albany	62,351	245,272	25.4%	24.5% (City)
		108,200 (metro)	444,100 (metro)		12.4% (County)
Madison, Wisconsin	Dane	77,849	365,569	21.3%	18.3%
Richmond, Virginia	n/a	114,400	659,200	17.2%	24.0% (City)
					9.0% (MSA)
Austin, Texas	Travis	133,933	815,566	16.4%	15.4%
Raleigh, North Carolina	Wake	89,073	610,236	14.6%	14.0%

Figure 3: Best State Capitals to Live In, 2019

Rank	State Capital	Overall Score	Ranking Among 50 States			
			Affordability	Economic Well Being	Education / Quality of Health	Quality of Life
1	Austin, Texas	67	12	1	4	4
3	Raleigh, North Carolina	65	2	8	9	19
4	Madison, Wisconsin	64	19	11	2	5
34	Albany, New York	49	45	43	17	14
36	Columbia, South Carolina	47	36	45	34	22
39	Richmond, Virginia	46	43	40	47	6

The above rankings help illustrate areas where Albany County can initiate and focus economic development efforts. Economic development initiatives impact each of the four measures shown in the table above but can have most immediate impact on Economic Well Being and Quality of Life. The Economic Well Being category measures include median household income, income growth and inequality, percent living in poverty, unemployment, and growth in number of businesses, among others. Quality of Life measures include, percent Millennial newcomers, number of attractions, per capita restaurants, bars, coffee shops, walkability, bike score, access to public transportation, average commute time, and average weekly hours worked, among others.

For the Economic Well Being measure, an aspirational goal for Albany County would be to move into the top quartile of all state capitals within five years. For the Quality of Life measure an aspirational goal would be for the County to move into the top ten of all state capitals within five years. Meeting these goals is not possible given the current economic development framework. But it is doable if a new direction is pursued by County leadership with support of the private sector and key stakeholders.

The Best Capital Cities to Live In ranking helps demonstrate what most residents of the state know, that is, Albany County is not presently top-of-mind nationally as a place that exudes vibrancy and unlimited potential. It is described by nearly everyone interviewed as part of this strategic planning process as ‘old school’. There is an uncomfortable view that it is failing not just to keep up, but that it lacks the spark that is needed to reinvent itself.

MODERN ECONOMIC DEVELOPMENT

Establishing a business-friendly environment is key, especially as the nation begins to feel recessionary pressures. In recessions, businesses need every advantage to help manage shrinking margins and stay afloat. In a severe recession, the counties that have strong leadership and a well-run, respected economic development group are best positioned to quickly pull others together, mobilize needed resources, and put in place policies that help businesses weather the storm. They project confidence that is grounded with real results. In fact, new business formations are highest as the economy begins to come out of a recession. The communities that plan during those hard times and are considered the most business-friendly gain the lion's share of new businesses and jobs when the economy begins to turn around.

Addressing business climate issues and meeting economic development and quality of life challenges requires courageous leadership and bold initiatives. To realize the aspirational goals noted earlier and to withstand unexpected economic challenges that may come its way, Albany County and its elected officials must change the perception of its business climate and the way it approaches economic development.

The economic development profession has changed dramatically in the past decade since Albany County closed-down its economic development office. Economic development is no longer dominated by big projects. It is a process that influences the growth and restructuring of local economies. It is done by understanding the dynamics of business change and taking early, proactive, business-friendly steps to help companies face unexpected challenges and grow. The purpose of economic development activity remains largely to create jobs and draw new income into the regional economy so that it can then be spent within the community and support non-basic employment sectors. The goal ultimately is to assure economic prosperity and contribute to a better quality of life. There is now a better understanding for how this happens best.

The profession has matured quickly from its transaction-oriented real estate and finance beginnings. At the beginning of this millennium, the approach shifted to placing more effort to understanding and responding to the investor's perspective, that is, focusing on the needs of businesses. Instead of just deals and incentives as areas for expertise, economic developers today must be data-driven, provide advice and advocacy, and know what it takes for a business to sustain growth and productivity, while competing in global markets.

These changes require organizations that are trusted, at the center-of-it-all, leaders in their communities, can strategize and integrate resources, and foster effective collaboration. In recent years, economic development organizations across the country have focused more attention on placemaking, recruiting talent, building entrepreneurial ecosystems, diversifying the economic base, resiliency and disaster planning, and more, all to protect and grow their economies.

Today, economic development activities in Albany County are marked by fragmentation of efforts and an inability of key groups to effectively collaborate to leverage resources and initiate more widespread, transformative changes in people's lives and the built environment. The scatter-shot approach to primarily transaction-oriented economic development sends a confusing message not just to residents, but to companies and prospective investors interested in doing business in the county who must navigate an array of governmental and nonprofit organizations to find answers to simple questions and assistance to deal with more complex issues. While there have been several standalone successes, this fragmentation is undoubtedly a reason why Albany County has lagged surrounding counties in attracting Empire State Development funding.

FORWARD THINKING ACTION

Albany County Executive Daniel P. McCoy initiated this economic development strategic planning process with three intentions:

- To create a collective understanding of current challenges as well as opportunities for future economic development growth in Albany County;
- To evaluate current organizational structures and functions to pinpoint missing elements in the county's current economic development system that impede its ability to take full advantage of economic opportunities and identify what County government might do to fill gaps; and
- To induce collaborative actions that produce transformative results.

The Albany County Business Advisory Board comprised of prominent business leaders was formed by the County Executive to provide input, guidance, and expertise throughout the planning process. Camoin 310, a Saratoga, NY-based economic development consulting firm, was retained to develop the Plan. Camoin 310 partnered with Bergmann Associates, architects, engineers, and planners with offices in Colonie, NY. As part of the planning process, the consultant team met with over 50 business leaders, economic development stakeholders, and municipal officials.

Camoin 310 and Bergmann resourced the strategic planning process with economic and planning intelligence. Camoin 310 prepared a profile of the county's economic situation and its role in the local and regional economy. This included the assessment of sociodemographic, industry, workforce, and real estate data and information. Camoin 310 also conducted a gap analysis of the county's current economic development system. In addition, Bergmann conducted a comprehensive assessment of the condition and capacity of the county's existing infrastructure that supports economic development and reviewed the County's land use plans and documents to extract information that was used during the planning process. Through a series of over 30 in person and telephone interviews that engaged over 50 people, the consultant team solicited input on technical elements.

The information from the research and analysis was used to develop an analysis of Albany County's challenges and opportunities for economic development. Guiding principles, goals, and strategies were crafted based on the findings and discussion of what would be needed for the County to fill gaps and capitalize on opportunities.

NOTABLE FINDINGS

The research and analysis, and stakeholder engagement process, uncovered the following findings and observations, which became the framework for this plan.

EDUCATION & KNOWLEDGE CREATION GIVES A COMPETITIVE EDGE

Albany County's concentration of educational assets, from great public K-12 schools to leading higher education institutions, are a differentiating factor. Albany County's 12 colleges and universities support the labor pool with over half of the regional program completions - over 14,500 completions out of 26,286 in the 8-county Capital Region. The Educational Services industry grew from 2008-2018 and is projected to continue this positive trend. This sector is a critical element of the region's talent pool and its ability to attract, retain, and expand businesses. There is a need to strengthen the connections between institutions, employers, and the community, and better communicate the cumulative opportunities that the local educational network offers.

GOVERNMENT IS BOTH A MAJOR EMPLOYER AND ECONOMIC DRIVER

Government is the largest sector by employment in Albany County. In 2018, one in every four jobs was in the public sector, most in State government, which has a high multiplier effect. For every State-government job in the county, another 2.49 jobs are generated somewhere else in the county in other sectors.

The Government sector represents a skilled labor force. Earnings rank among the highest in the county, second only to the Utilities industry. Employment declined slightly from 2008 to 2018 at the federal and local levels due to budget cuts, and subsequent job cuts; yet it continues to be an important economic driver for the county's economy. Initiatives to create services and amenities that are attractive to this talented workforce can induce additional spending and attract employees as residents.

SENSE OF PLACE IS LACKING

From startups to national businesses, when a company is considering investing in New York's Capital Region, Albany County is typically not their first-choice. Well-established businesses in the community are increasingly concerned about their ability to attract and retain workers. Talent attraction and retention is the number one issue for economic development across the country, but the specific issues that must be addressed are different for each community. Albany County's challenge is a significant lack of sense of place and brand identity. To compete for top talent to support its businesses, it must become a place where talent wants to be.

The County needs to support community-based development efforts in existing neighborhoods across the county to improve the economic development building stock (housing, retail, office, industrial space, etc.). It must also support the creation of modern professional housing, mixed-use commercial corridor redevelopment, land-banking, pocket-parks, and other new urbanism project development. Initiatives to strengthen the livability of neighborhoods and boost the family-friendly reputation of the county are needed to improve overall quality-of-place.

CAPITAL INVESTMENTS IN INFRASTRUCTURE ARE NEEDED

Albany County is located at a crossroads of transportation infrastructure, and connectivity to state, regional, national, and international markets is one of the County's major assets. However, as one interviewee put it, "Our infrastructure is tired". A majority of the County owned roads are nearing the end of their lifespan; over 40% of the bridges in the County are in fair or deficient condition; sidewalks are frequently absent in suburban areas or in poor condition in urban areas; and, although the County's sewer district has sufficient capacity to support new development, a comprehensive understanding of countywide sewer and water infrastructure is lacking. Future capital investments in transportation projects will not only improve the efficient movement of people and goods throughout the County,

but it will also create opportunities to approach transportation infrastructure from a multimodal perspective that benefits and accommodates all modes of transit (e.g., cars, trucks, public transit, biking, walking) and fosters a sense of place. Further, the development of an inter-municipal asset inventory will enable the County to quickly identify and prioritize strategic areas that have the infrastructure resources and capacity to support future development.

HEALTH CARE IS LEADING EMPLOYMENT GROWTH

The region's aging population is driving demand for health care and Albany County is the hub for the region's health care services. The Health Care sector is the second largest sector by employment in Albany County, making it a significant contributor to the county's economic base as well as a critical quality-of-life matter. The sector outpaced that of any other sector in the number of jobs added between 2008 and 2018 and is expected to lead employment growth in the coming years. The healthcare workforce is aging in Albany County and retirement potential is high compared to the national average. Ensuring a pipeline of talented workers for this industry sector is critical.

COUNTY NEEDS MORE BUSINESS-FRIENDLY MESSAGING

There is a feeling among some in the business community that the County is less focused on supporting local businesses that surrounding counties and the role of businesses in the county is overlooked – especially businesses outside of the City of Albany. Perhaps more than anything, successful economic development initiatives are built on trust. For the economic development strategy to succeed, the greater business community must be engaged as a critical partner and feel supported by the County. Building strong, meaningful relationships with the county's business leaders, throughout the county, is a critical step to developing a dynamic and resilient economy.

CULTURE & TOURISM ASSETS ARE LAGGING

The data is clear, the high-level industry sectors that support culture and tourism are less concentrated in Albany County. While historic 10-year job growth in the Arts, Entertainment, and Recreation sector outpaced the region and state, job growth in Retail Trade and Accommodation and Food Services fell short. Strategies around branding, storytelling, and engagement internally to residents and externally to visitors can help Albany County find its role in this sector. Albany County is experienced at hosting major athletic competitions, such as the Gym Rat Challenge, and MAAC Men's & Women's Basketball Championships.

ABUNDANT AGRICULTURAL RESOURCES CAN BE LEVERAGED TO FOSTER ECONOMIC DEVELOPMENT THAT IS ROOTED IN PLACE

Albany County is home to approximately 500 farms, covering over 60,000 acres of land and comprising nearly 20% of the County's total land area. The County's agricultural system supplies the food, beverage, and fiber industries, and supports manufacturing, distribution, recreation, tourism, education, and entertainment sectors. In addition to its critical role in the economy, agriculture also preserves the scenic agrarian landscape and cultural heritage of the County that many residents and visitors value. Addressing challenges currently faced by the agricultural industry and its local supply chain, such as high land values, broadband access, workforce development, and development pressure, will be an important step in supporting and growing the County's agricultural producers.

TRANSPORTATION & WAREHOUSING IS LAGGING DESPITE STRONG INFRASTRUCTURE ASSETS

Albany County's interstates, rail lines, airport, and ports offer superb connectivity to northeast markets, however, the area's transportation and warehousing industry is less concentrated and added jobs at a slower rate compared to the State and the U.S. This sector is responsible for connecting businesses to their supply chain (suppliers and customers) and is therefore a central component of the economy. Transportation and Logistics should be considered in the context of supporting other sectors, specifically placemaking initiatives to support retailers and restaurants. Workforce development is also needed to support this sector, as it is increasingly reliant on digital technologies and data analytics.

The County's ports are preparing to make significant infrastructure investments that may help spur expansion of the transportation and warehousing industry. The Port of Albany recently released an RFP for the development of construction and bid documents for the construction of a 60,000 SF maritime warehouse/transit shed, reconstruction of its entire maritime terminal (20-acres), and roadway reconstruction within the Port. The Port of Albany also recently acquired an 80-acre site, which will be redeveloped into commercial and industrial land uses. This 80-acre redevelopment is expected to generate a large number of jobs in the maritime, distribution, and logistics sectors. The Port of Coeymans is currently seeking State and federal permission to convert a temporary dock structure into a permanent dock facility, which would expand the port's facilities and services.

The County's major transportation hubs for the distribution of freight, including rail yards, the Albany International Airport, and the ports, are currently zoned industrial, which accommodates uses associated with the transportation and warehousing industry. With respect to the relationship between zoning and future opportunities to expand the transportation and warehousing industry along the County's highway system, a more detailed analysis is required. This analysis requires an assessment of exit interchanges along the County's highway system to identify areas that can accommodate and are compatible with high volumes of truck traffic followed by an examination of local zoning codes to identify necessary changes to allow uses associated with the transportation and warehousing industry.

The establishment of new intermodal centers, regional distribution hubs, and manufacturing centers to support the growth of the transportation and warehousing industry should be accompanied by coordination and collaboration with municipalities to ensure freight-generating activities are compatible (or appropriately mitigated) with adjacent land uses, local policies, and community visions for future development.

PROFESSIONAL, SCIENTIFIC, & TECHNICAL SERVICES ARE DECLINING ACROSS MOST SUB-SECTORS

Businesses within this sector contribute to the regional business environment by offering services to support the business operations of the region's major employers – essentially selling knowledge and expertise. It is the fourth-largest sector by employment in Albany County. Across the U.S. this sector has been growing since the recession as the national economy moves toward a service-based economy. However, in Albany County this sector's performance is sub-par as most subsectors in this group started shedding jobs around 2014-2015. Greatest losses occurred in Research and Development in the Physical, Engineering, and Life Sciences, sector, which coincides with the disruption in leadership at SUNY Polytechnic Institute that resulted in their private-sector partnerships dissolving, and the loss of hundreds of top engineering and research jobs.

The two exceptions to the decline in the Professional, Scientific, & Technical Services sector are Commuter Systems Design and Related Services, and Architectural, Engineering, and Related Services.

THE REGION HAS ASSETS TO SUPPORT GROWTH IN GREEN ENERGY SECTORS

Albany County has a number of existing and potential assets that support growth on the green energy sector: solar power and wind power projects are being discussed in the Hill Towns, the ports provide a significant asset to support growth in green energy and are being considered by the State for investment, CDTA is testing emerging technology with electric busses, and Albany is home of the New York Battery and Energy Storage Technology Consortium, Inc. Additionally, recent changes to the State Environmental Quality Review Act (SEQRA) regulations significantly reduce and streamline permitting requirements for the installation of solar arrays (25-acres or less in size) on remediated brownfields, industrial sites, and on existing structures. Albany County's energy-agenda outlines its commitment to this sector and its dedication to becoming the greenest county in New York State.

CYBERSECURITY COULD PRESENT EMERGING OPPORTUNITIES

With its role as the State Capital, deep university-based and corporate research capacity in the region, and strengths in Finance and Insurance and Health Care, there is a growing need in the region for Cyber Security services. This could be an opportunity for Albany County to develop a niche expertise for this emerging industry. Developing the talent pipeline will be critical to success in growing and supporting the cybersecurity industry.

THERE IS AN OPPORTUNITY TO FILL THE GAP IN THE COUNTY'S ECONOMIC DEVELOPMENT SYSTEM

Unlike other neighboring communities, Albany County does not have a go-to economic development organization. There is a clear need that the County can step into as the connector – be the point guard, the play maker. This is equally imperative in economically good and bad times. The new Albany County EDO should be allowed the strength and flexibility to lead economic development strategies for the county without being tied to the political processes. Elements of high-performing economic development organizations are illustrated in the figure below.

Figure 3: Elements of High Performing Economic Development Organizations



MOVING FORWARD

The Economic Development Strategy for Albany County is structured around four goal areas. To achieve these four goals, strategic initiatives have been developed with specific actions that the County and its partners can take to strengthen and diversify the economy to be more resilient, create quality jobs for residents, and improve overall quality of life in the County. The goals and initiatives are summarized below, and a full action plan matrix is provided in Chapter 4.

GOAL 1: FILL THE GAP THAT EXISTS IN ALBANY COUNTY'S ECONOMIC DEVELOPMENT ECOSYSTEM AND ALIGN REGIONAL RESOURCES

- Appoint Executive Liaison
- Form Ad Hoc Organizing Work Group
- Establish Albany County Local Development Corporation
- Develop a Stakeholders Communications Plan
- Practice Business Friendly Messaging Across all County Departments
- Explore a Sustainable Funding Model
- Explore Management & Governance Options for LDC
- Create and Maintain a Website for Economic Development in Albany County
- Streamline the County Referral Process
- Create a Digital One-Stop-Shop for Economic Development in Albany County
- Coordinate a Business Retention and Expansion Program in Support of Ongoing Business Retention & Expansion Efforts

GOAL 2: TARGET INVESTMENTS AROUND CATALYTIC PROJECTS AND CRITICAL INFRASTRUCTURE

Planning

- Develop an Albany County Comprehensive Plan
- Create an Albany County Open Space and Trails Plan to Enhance Quality of Life

Transportation

- Adopt a Transit-Oriented Development Policy
- Establish Rural Road Design Standards

Water

- Develop an Inter-Municipal Inventory of Public Water Infrastructure
- Upgrade Water Infrastructure
- Implement Source Water Protections

Telecommunications

- Enhance Broadband Access, Speed, and Affordability

Project Development

- Support the Land Bank and its Real Property Disposition Strategy
- Prioritize Development Adjacent to the Airport
- Consider Reuse of County's State Street Building
- Identify a Transformative Downtown Development Project
- Prioritize and Position Old Industrial Buildings and Sites for Redevelopment

GOAL 3: CREATE, RETAIN, AND ATTRACT TOP TALENT AROUND GROWTH SECTORS

- Participate in the Workforce Development Network

Cybersecurity, FinTech, & InsureTech

- Focus BR&E on Cybersecurity, FinTech/InsureTech
- Communicate Career Opportunities in Cybersecurity to Albany County Students and their Networks
- Partner with Libraries to Make Youth Coding Classes Available to Students Across Albany County
- Launch a Business Attraction Campaign Targeting Cybersecurity, FinTech

Advanced Transportation & Logistics

- Draw Local Attention to the Ports
- Create a Workforce Training Program Focused on the Warehousing, Distribution, and Light Manufacturing Industries
- Prepare for Autonomous Vehicles

GOAL 4: TRANSFORM ALBANY'S IMAGE

- Leverage Major Athletic Events to Showcase Albany County, 'the place'
- Tell the Stories of Women in Business, Innovation, Competition, and Politics
- Create Excitement for Business and Entrepreneurship in Albany County
- Establish Albany County as a Clean Energy Hub



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ECONOMIC DEVELOPMENT STRATEGY

ALBANY COUNTY, NY

VOLUME 2: ECONOMIC PROFILE

2020

PREPARED BY:



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FINDINGS SNAPSHOT

As part of the initial research to produce an economic development strategy for Albany County, NY, Camoin 310 gathered and analyzed economic data to fully understand demographic and economic conditions. This information was used to inform the subsequent steps of the strategic planning process, including project identification and strategy development. What follows is a summary of the findings from this analysis.

SOCIOECONOMIC TRENDS

- ◆ As of 2018, approximately 317,000 people live within Albany County. From 2010-2018, the rate of growth in Albany County was 4.4%, which was above that of the Capital Region (3.7%) and New York State (1.9%) yet lags that of the U.S. (6.9%).
- ◆ Due to the high presence of undergraduate colleges and universities in the area, Albany County's population contains a significant portion of young adults aged 20 to 24. In the coming years, Albany County can expect to experience a decline in the number of children and young adults aged 5 to 29 as well as a decline in middle aged adults 45 to 59. Most noticeably there is a significant anticipated gain of 70 to 84-year olds, skewing the population to an older demographic.
- ◆ As of 2018, the median household income in Albany County was \$63,833, which is comparable to the region and state, and well above the U.S. median household income of \$58,100. By 2023, the county's median household income is expected to reach \$72,029, representing a 12.8% increase. This rate of increase is slower than the Capital Region (14%) New York State (15.9%) and U.S. (13.1%).
- ◆ Albany County residents are extremely well educated. Over 20% of the county's 25-and-up population has a Graduate/Professional degree compared to 16% in both the region and state, and 12% in the U.S.
- ◆ Commuting patterns for Albany County indicate that about 39% of the county's workforce lives outside the county and 61% lives within the county. Approximately 36.3% county residents work in the City of Albany and 17.7% work in the Town of Colonie. Together, the City of Albany and the Town of Colonie account for over half of the residents' commute destinations. Of the 8-counties in the Capital Region, Albany County has the shortest mean commute time of 20.4 minutes.

ECONOMIC PROFILE

- ◆ Albany County is home to approximately 245,000 jobs, having added about 4,600 over the last ten years, an increase of 2%. Albany County added jobs at the same rate to the Capital Region (2%), but lagged the state (8%), and nation (7%).
- ◆ Not surprisingly, Government is the largest sector in Albany County, with 62,500 jobs. The top five industry sectors by employment include Government (62,500 jobs or 26% of all jobs), Healthcare and Social Assistance (35,000 jobs 14% of all jobs), Retail Trade (22,900 jobs or 9% of all jobs), Professional, Scientific and Technical Services (16,600 jobs or 7% of all jobs), and Accommodation and Food Services (14,800 jobs or 6% of all jobs).
- ◆ Between 2008 and 2018, the Health Care and Social Assistance sector employment outpaced that of any other sector in number of jobs, adding 4,300 for an increase of 14%. Also, during that timeframe, Educational Services grew by 1,700 jobs or 19%, Administrative and Support and Waste Management and Remediation

Services grew by 1,400 jobs or 12%, Accommodation and Food Services grew by 1,300 jobs or 10%, and Finance and Insurance grew by 1,000 or 8%.

- ◆ Healthcare and Social Assistance is the industry with the most anticipated growth, growing by 17% and adding 6,000 jobs to Albany County. Administrative and Support and Waste Management and Remediation Services is anticipated to grow by 26% or 3,300 jobs, Finance and Insurance will gain 1,900 jobs (14%), and Educational Services will grow by 1,700 jobs (15%).
- ◆ Albany County has notable concentrations in Legal; Life, Physical, and Social Science; Community and Social Service; Business and Financial Operations; and Computer and Mathematical occupations.
- ◆ Looking at the distribution of businesses by size in Albany County, between 2012 and 2017, the number of establishments increased by 2,905 or 15.9%, compared to 15.8% in the MSA (Albany-Schenectady-Troy) and 15.1% nationally. Stage 1 firms—firms with between 2 and 9 employees—constituted the largest proportion of growth in the county.

REAL ESTATE TRENDS

- ◆ The office market in the Albany-Schenectady-Troy MSA has steadily increased from 2007. As of 2017, there were over 2.9 million square feet of available office space for a vacancy rate of 4.5%. This low vacancy rate is met with limited construction creating pent up demand for office space. Growth in office-utilizing industries has contributed to the low vacancy rate by increasing office space absorption.
- ◆ The Town of Colonie is the primary driver of retail commerce in Albany County with a significant retail presence along Wolf Road. Retail is working hard to adapt to national turbulence in the market.
- ◆ Industrial real estate is nearly fully occupied with a very low vacancy rate of 2.6%. Similar to office-space trends, low vacancy rates in combination with a decrease in construction of industrial buildings have led to a pent-up demand for industrial space. Historic growth in the industrial market has been driven by the manufacturing industry which grew by 33% from 2010 to 2017.

INTRODUCTION

As part of the initial research for the County's Economic Development Strategy, Camoin 310 gathered and analyzed demographic and economic data to fully understand the existing conditions in Albany County. This information was used to inform the subsequent steps of the planning process.

DATA SOURCES

Much of the data in this report was acquired from Esri Business Analyst Online (ESRI) and Economic Modeling Specialists International (EMSI). ESRI uses the 2000 and 2010 Census as its base data. It uses proprietary statistical models and data from the US Census Bureau, the US Postal Service, and other sources to project current statistics and future trends. ESRI data are often used for economic development, marketing, site selection, and strategic decision making. For more information, visit www.esri.com.

EMSI uses data compiled from several sources, including the US Census Bureau and US Departments of Health and Labor. Using specialized proprietary processes and models, it provides estimates on current statistics and predicts future trends. Visit www.economicmodeling.com for additional information. The data used are from EMSI's Complete Employment data set, which includes both jobs covered and uncovered by unemployment insurance. In other words, it includes both traditional employment and non-traditional employment such as the self-employed. As traditional jobs have been replaced or augmented by freelance work, consulting, and self-employment, these non-covered jobs have become much more important to the economy, and EMSI provides researchers with a way to track the trends over time.

Other sources include the American Community Survey for demographic and socioeconomic data and YourEconomy.org for data on establishments by stage of growth. For a full list of data sources see Attachment A: Data Sources.

Figure 1: Study Area Map



STUDY REGIONS

This data analysis was conducted to identify demographic, socioeconomic, and business and industry trends in the Albany County economy in comparison to the regional and state economies.

Data was collected for the following geographies: Albany County, Capital Region (defined as the eight-county region including the counties of Albany, Columbia, Greene, Rensselaer, Saratoga, Schenectady, Warren and Washington), and New York State. Where appropriate, we also compare against the United States.

SOCIOECONOMIC ANALYSIS

To identify challenges and opportunities for future economic development initiatives, it is important to understand the current socioeconomic conditions in Albany County. The following section highlights some important demographic and socioeconomic characteristics.

POPULATION

As of 2018, approximately 317,000 people live within Albany County. Since 2010, the rate of growth in Albany County is above that of the Capital Region and New York State and lags national growth.

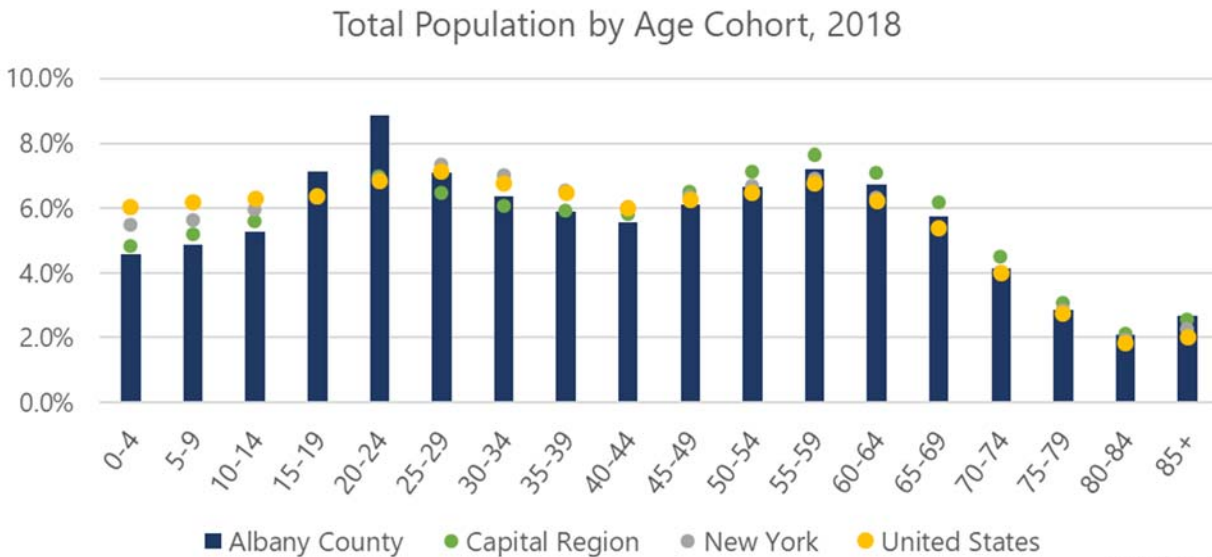
Figure 2: Population, 2010-2023

Population, 2010 - 2023					
	2010	2018	2023	% Change 2010 - 2018	% Change 2018 - 2023
Albany County	304,204	317,479	325,623	4.4%	2.6%
Capital Region	1,079,207	1,118,984	1,142,247	3.7%	2.1%
New York	19,378,102	20,070,143	20,453,993	3.6%	1.9%
United States	308,745,538	330,088,686	343,954,683	6.9%	4.2%

Source: Esri

When examining age distribution, Albany County has a significant portion of young adults (20 to 24-year-olds) compared to the other geographies. This is due to a high presence of undergraduate colleges and universities in the area, including University at Albany, Siena College, Albany Medical College, the College of Saint Rose, and Sage College. Conversely, Albany County shows a deficit of children aged 0 to 14 compared to the Capital Region, state, and nation.

Figure 3: Total Population by Age Cohort, 2018



Source: Esri

The table below shows how Albany County's population is expected to change from 2018 to 2023 based on 5-year age cohorts. Albany County can expect to experience a decline in the number of children and young adults aged 5 to 29 as well as a decline in middle aged adults 45 to 59 years old. Most noticeably there is a significant anticipated gain of 70 to 84-year olds, skewing the population to an older demographic.

Figure 4: Albany County Population by Age Cohort, 2018-2023

Albany County Population by Age Cohort, 2018 - 2023				
Age Cohort	2018	2023	Change 2018 - 2023	% Change 2018 - 2023
0-4	14,612	15,023	411	2.8%
5-9	15,474	15,300	(174)	(1.1%)
10-14	16,733	16,305	(428)	(2.6%)
15-19	22,701	22,273	(428)	(1.9%)
20-24	28,140	27,054	(1,086)	(3.9%)
25-29	22,618	22,368	(250)	(1.1%)
30-34	20,248	21,552	1,304	6.4%
35-39	18,759	19,826	1,067	5.7%
40-44	17,675	19,651	1,976	11.2%
45-49	19,505	18,133	(1,372)	(7.0%)
50-54	21,151	19,799	(1,352)	(6.4%)
55-59	22,909	21,096	(1,813)	(7.9%)
60-64	21,386	22,173	787	3.7%
65-69	18,265	19,997	1,732	9.5%
70-74	13,243	16,723	3,480	26.3%
75-79	8,980	12,013	3,033	33.8%
80-84	6,566	7,731	1,165	17.7%
85+	8,514	8,606	92	1.1%
18+	260,155	268,755	8,600	3.3%

Source: Esri

As of 2018, Albany County had a median age of 39.9 making it slightly younger than the Capital Region, but older than the state and nation. Median age is projected to increase across all geographies into 2023, with Albany County aging slightly faster than the Capital Region.

Figure 5: Median Age, 2018-2023

Median Age, 2018 - 2023				
	2018	2023	Change 2018 - 2023	% Change 2018 - 2023
Albany County	39.9	40.8	0.9	2.3%
Capital Region	42.2	43.0	0.8	1.9%
New York	39.0	40.0	1.0	2.6%
United States	38.3	39.0	0.7	1.8%

Source: Esri

HOUSEHOLDS & INCOME

Similarly, total number of households grew from 2010 to 2018 in all geographies with Albany County slightly outpacing the Capital Region and New York State. Household growth is projected to continue across all geographies into 2023.

Figure 6: Households, 2010-2023

Households, 2010 - 2023					
	2010	2018	2023	% Change 2010 - 2018	% Change 2018 - 2023
Albany County	126,251	130,446	133,405	3.3%	2.3%
Capital Region	439,996	454,046	462,743	3.2%	1.9%
New York	7,317,755	7,524,399	7,647,677	2.8%	1.6%
United States	116,716,292	124,110,001	129,076,036	6.3%	4.0%

Source: Esri

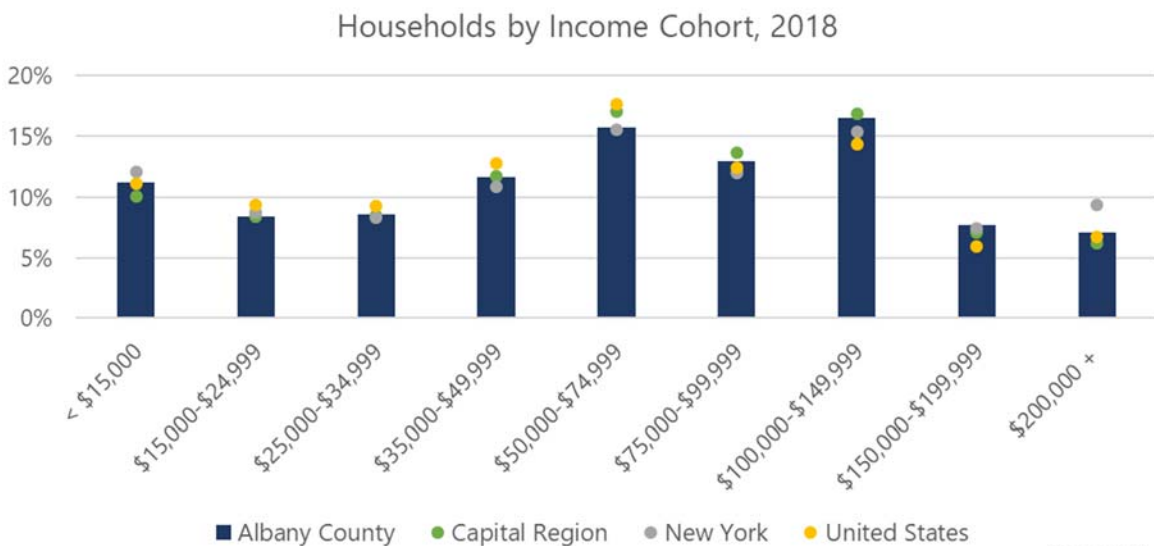
As of 2018, the median household income in Albany County was \$63,833, which is comparable to the region and state, and well above the U.S. median household income of \$58,100. By 2023, the county's median household income is expected to reach \$72,029, representing a 12.8% increase from 2018. This rate of increase lags other geographic locations.

Figure 7: Median Household Income, 2018-2023

Median Household Income, 2018 - 2023				
	2018	2023	Change 2018 - 2023	% Change 2018 - 2023
Albany County	\$ 63,833	\$ 72,029	\$ 8,196	12.8%
Capital Region	\$ 63,982	\$ 72,931	\$ 8,949	14.0%
New York	\$ 63,751	\$ 73,883	\$ 10,132	15.9%
United States	\$ 58,100	\$ 65,727	\$ 7,627	13.1%

Source: Esri

Figure 8: Households by Income Cohort, 2018

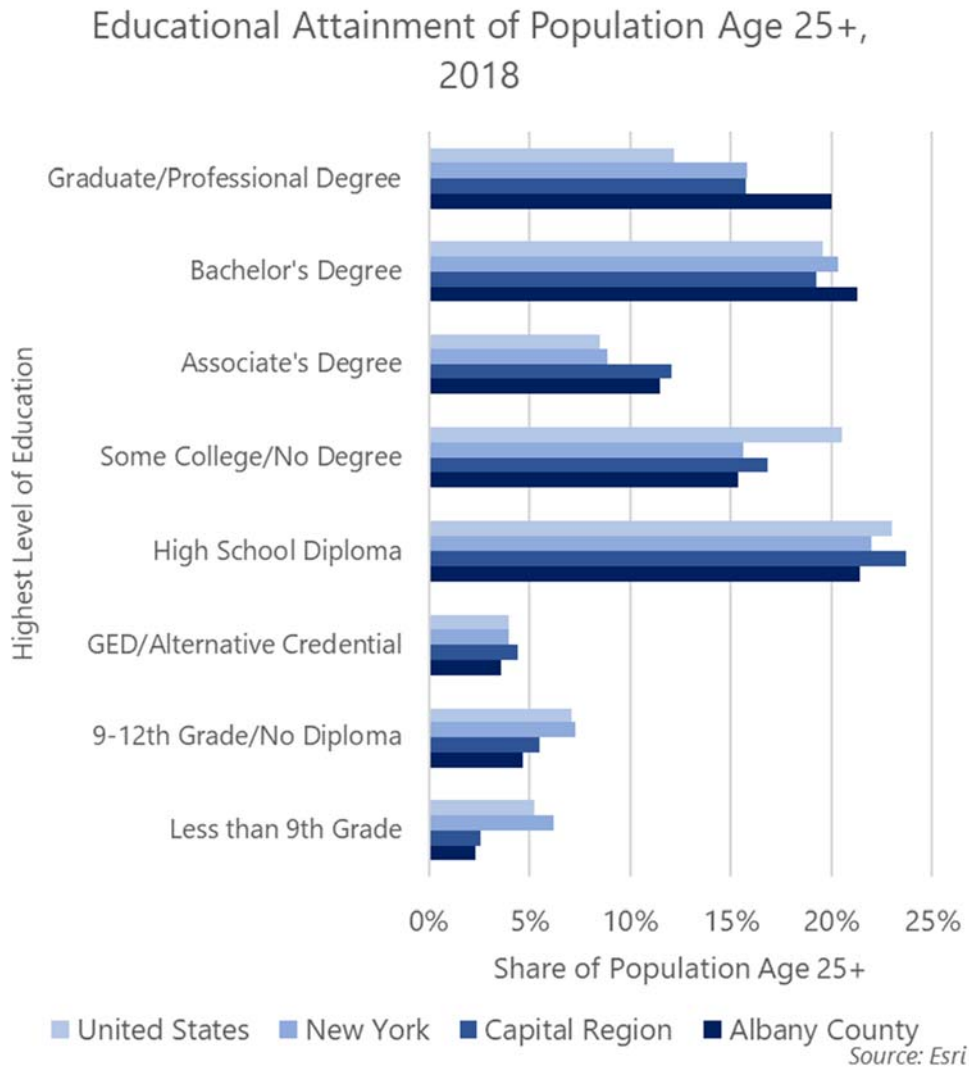


Source: Esri

EDUCATION ATTAINMENT

Albany County residents are extremely well educated. Twenty percent (20%) of the county's population 25 years old or greater has a Graduate/Professional degree compared to sixteen percent (16%) in both the region and state, and twelve percent (12%) in the nation. This is a positive indicator of a strong regional workforce. We explore the characteristics of the workforce in greater detail in a later section of this report.

Figure 9: Educational Attainment of Population Age 25+, 2018



UNEMPLOYMENT RATES

The 2018 unemployment rate in Albany County ranks as the lowest of the comparison geographies at 4.8%. This is an indicator of a tight labor market and echoed by Albany County employers who are finding it increasingly difficult to attract and retain workers.

Figure 10: Unemployment Rate, 2018

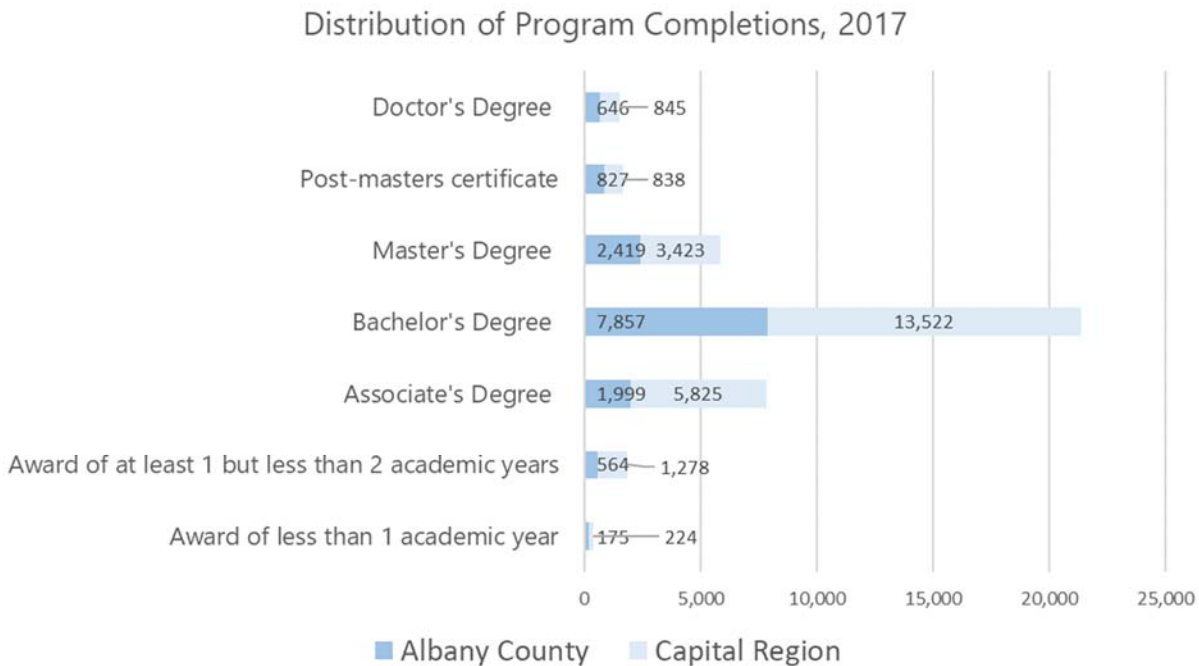
Unemployment Rate, 2018	
Albany County	4.8%
Capital Region	5.0%
New York	5.3%
United States	4.8%

Source: Esri

HIGHER EDUCATION

Albany County is a major source of higher education for the region. The county contributes nearly 60% of the bachelor's degree completions, 70% of the mater's degree completions, and 76% of the doctor's degree completions in the 8-county Capital Region.

Figure 11: Distribution of Program Completions, 2017

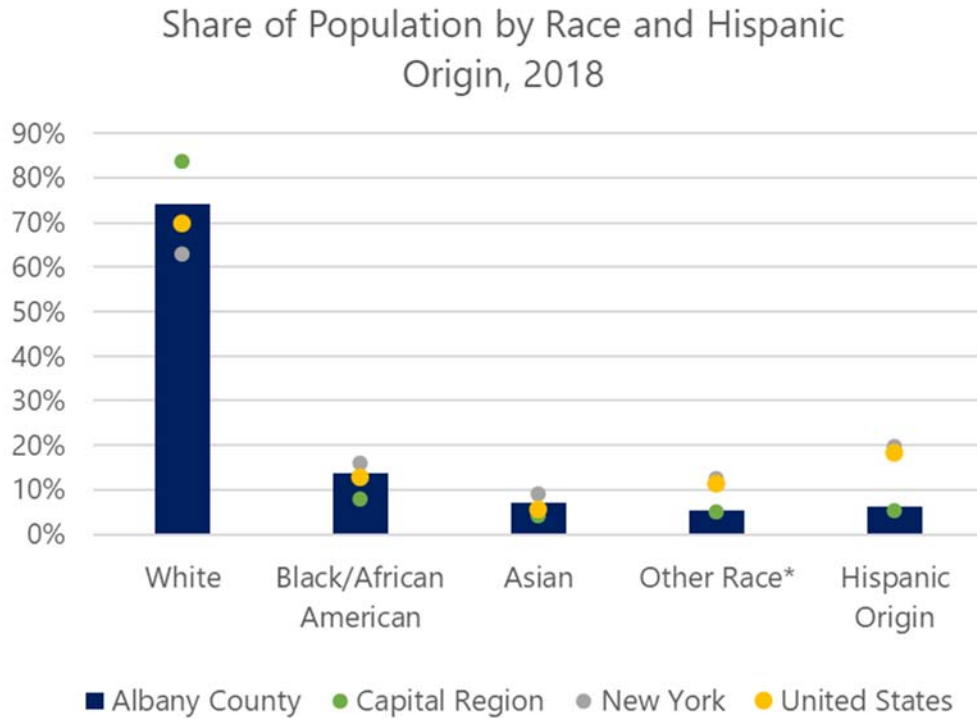


Source: Emsi

RACE/ETHNICITY

Non-white residents make up about 26% of Albany County’s population compared to 16% in the Capital Region and 37% in New York State. Black/African American and Asian residents make up the majority of the county’s non-white population, with only 5% of residents self-identifying as an “Other Race”. Albany County has a disproportionately small percentage of residents self-identifying as having Hispanic Origin (6%) compared to the State (20%) and U.S. (18%). Note that people who identify their origin as Hispanic can be of any race.

Figure 12: Share of Population by Race and Hispanic Origin, 2018



Source: Esri

*Other Races includes the following responses American Indian, Pacific Islander, Some Other Race, and Two or More Races

MARKET SEGMENTATION ANALYSIS

As Albany County looks to create economic strategies, understanding the characteristics of its consumers is vital to success. A market segmentation analysis provides insight into the likely preferences and behaviors of a community's residents, based on their demographic and economic characteristics. For Albany County, this analysis is used to understand what types of activities, shopping, dining, and experiences its residents are likely to enjoy. Market segmentation is based on the concept that people with similar demographic characteristics, purchasing habits, and media preferences naturally gravitate into the same neighborhoods – like a tapestry. Businesses utilize market or “tapestry” segmentation to understand their customers’ lifestyle choices, purchasing preferences, and how they spend their free time.

Esri’s Tapestry Segmentation System classifies U.S. neighborhoods based on socioeconomic and demographic composition. Descriptions of all tapestry segments listed below are included in Attachment B. The following table shows the breakdown of the top tapestry segments that make up Albany County, with a description of each below.

Figure 13: County of Albany Tapestry Segments

County of Albany Tapestry Segments					
Tapestry Segment	Households	Percent	Median Age	Median Income	Median Net Worth
In Style (5B)	14,773	11.3%	42.0	\$ 73,000	\$ 165,800
Emerald City (8B)	12,211	9.4%	37.4	\$ 59,200	\$ 52,700
Savvy Suburbanites (1D)	9,556	7.3%	45.1	\$ 108,700	\$ 518,100
Parks and Rec (5C)	8,272	6.3%	40.9	\$ 60,000	\$ 125,500
Comfortable Empty Nesters (5A)	8,035	6.2%	48.0	\$ 75,000	\$ 293,000
Set to Impress (11D)	7,654	5.9%	33.9	\$ 32,800	\$ 12,200
Old and Newcomers (8F)	6,960	5.3%	39.4	\$ 44,900	\$ 30,900

Source: Esri

- ◆ **“In Style”** residents embrace an urban lifestyle that includes support of the arts, travel, and connectivity through mobile devices. Comprised of professional couples or single households without children, they have the time to focus on their homes and their interests. The population is slightly older and already planning for their retirement.
- ◆ **“Emerald City”** residents live in lower-density neighborhoods of urban areas throughout the country. This group is highly connected, using the Internet for entertainment and making environmentally friendly purchases. Many embrace the “foodie” culture and enjoy cooking adventurous meals using local and organic foods. Music and art are major sources of enjoyment. They travel frequently, both abroad and domestically.
- ◆ **“Savvy Suburbanites”** residents are well educated, well read, and well capitalized. Families include empty nesters and empty nester wannabes, who still have adult children at home. Located in older neighborhoods outside the urban core, their suburban lifestyle includes home remodeling, gardening, and the active pursuit of sports and exercise. They enjoy good food and wine, plus the amenities of the city’s cultural events.
- ◆ **“Parks and Rec”** residents are practical suburbanites that have purchased homes within their means. Many of these families are two-income married couples approaching retirement age; they are comfortable in their jobs and their homes, budget wisely, but do not plan on retiring anytime soon or moving. Neighborhoods

are well established, and the appeal of these kid-friendly neighborhoods is now attracting a new generation of young couples.

- ◆ **“Comfortable Empty Nesters”** residents in this large, growing segment are older, with nearly half of all householders aged 55 or older. Many still live in the suburbs where they grew up. Most are professionals working in government, health care, or manufacturing. These Baby Boomers are earning a comfortable living and benefitting from years of prudent investing and saving. They value their health and financial well-being.
- ◆ **“Set to Impress”** residents are depicted by medium to large multiunit apartments with lower than average rents. Nearly one in three residents is 20 to 34 years old, and over half of the homes are single person and nonfamily households. Income levels are low; many work in food service while they are attending college. They are very conscious of their image and seek to bolster their status with the latest fashion. Set to Impress residents are tapped into popular music and the local music scene.
- ◆ **“Old and Newcomers”** features singles’ lifestyles, on a budget. The focus is more on convenience than consumerism, economy over acquisition. Old and Newcomers is composed of neighborhoods in transition, populated by renters who are just beginning their careers or retiring. Some are still in college; some are taking adult education classes. They support charity causes and are environmentally conscious. Age is not always obvious from their choices.

While there is a diverse range of lifestyles within the top seven tapestry segments, we do note there seem to be two overarching segments that start to emerge. The first is an older, educated resident who appreciates culture, art, and music; has a relatively high net worth and lives in homes they own. The second is younger, has a lower-than-average net worth, and lives in higher density neighborhoods. More likely to rent and with a lower median income, they also appreciate culture be it through the music scene, travel, or a continuing education class. Many in this second segment are students. In addition to being connected by an appreciation of culture and the arts, there is also a similar appreciation for food, be it through convenience or quality, as well as use of technology.

COMMUTE PATTERNS & REMOTE WORKERS

Commuting patterns for Albany County indicate that there are approximately 220,000 people employed within Albany County with 39% of them living outside the county and 61% living within the county.

Figure 14: Top 10 Places of Residence for Albany County Workers

The adjacent table displays the top 10 places of residence for Albany County workers. The City of Albany and Town of Colonie contribute the greatest percentage of workers at about 11.5% each. Outside of Albany County, the cities of Schenectady and Troy are home to 3.8% and 3.4% of Albany County's workforce, respectively.

Top 10 Places of Residence for Albany County Workers		
	Number of Workers	Percent of Workers
Albany city (Albany, NY)	25,475	11.6%
Colonie town (Albany, NY)	25,218	11.5%
Bethlehem town (Albany, NY)	10,818	4.9%
Guilderland town (Albany, NY)	10,378	4.7%
Schenectady city (Schenectady, NY)	8,357	3.8%
Troy city (Rensselaer, NY)	7,463	3.4%
Clifton Park town (Saratoga, NY)	6,339	2.9%
Rotterdam town (Schenectady, NY)	5,434	2.5%
Glenville town (Schenectady, NY)	4,038	1.8%
East Greenbush town (Rensselaer, NY)	4,021	1.8%
All Other Locations	111,986	51.0%
Total	219,527	100.0%

Source: US Census OnTheMap, 2015

Figure 15: Top 10 Places of Work for Albany County Residents

Looking at where Albany County residents work, approximately 36.3% County residents work in the City of Albany and 17.7% work in the Town of Colonie. Together, the City of Albany and the Town of Colonie account for over half of the residents' commute destinations. Notable work destinations outside of Albany County include the City of Troy in Rensselaer County (3.5% of Albany residents), the City of Schenectady (3.2%), and the Borough of Manhattan (2.5%).

Top 10 Places of Work for Albany County Residents		
	Number of Residents	Percent of Residents
Albany city (Albany, NY)	48,057	36.3%
Colonie town (Albany, NY)	23,490	17.7%
Guilderland town (Albany, NY)	5,281	4.0%
Bethlehem town (Albany, NY)	5,099	3.8%
Troy city (Rensselaer, NY)	4,670	3.5%
Schenectady city (Schenectady, NY)	4,200	3.2%
Manhattan borough (New York, NY)	3,374	2.5%
East Greenbush town (Rensselaer, NY)	2,322	1.8%
Clifton Park town (Saratoga, NY)	1,794	1.4%
Niskayuna town (Schenectady, NY)	1,473	1.1%
All Other Locations	32,731	24.7%
Total	132,491	100.0%

Source: US Census OnTheMap, 2015

Figure 16: Mean Commute Time

Mean Commute Time	
County	Minutes
Albany County, NY	20.4
Columbia County, NY	25.8
Greene County, NY	27.6
Rensselaer County, NY	24.4
Saratoga County, NY	25.3
Schenectady County, NY	22.9
Warren County, NY	22.8
Washington County, NY	26.2

Source: Emsi

Of the 8-counties in the Capital Region, Albany County has the shortest mean commute time of 20.4 minutes, which is a competitive advantage with respect to attracting and retaining workers. We heard this sentiment frequently during the interviews when asking stakeholders why they live in the county – the relative ease of getting to work is an important quality of life factor for many.

Figure 17: Remote Workers

Remote Workers	
County	Pct.
Albany County, NY	3.5%
Columbia County, NY	6.3%
Greene County, NY	4.3%
Rensselaer County, NY	3.4%
Saratoga County, NY	5.9%
Schenectady County, NY	3.1%
Warren County, NY	3.4%
Washington County, NY	4.1%

Source: Emsi

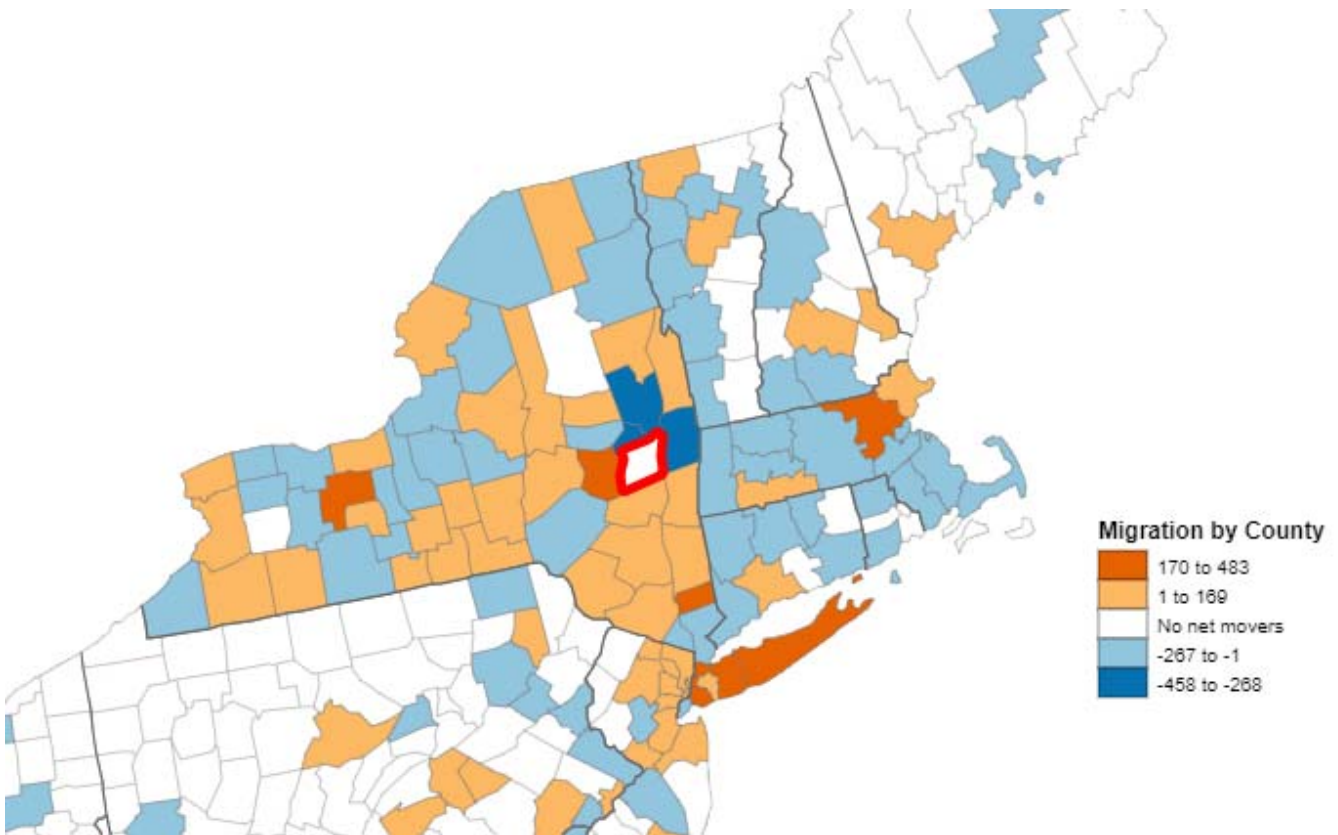
About 3.5% of Albany County’s workforce works remotely, which is similar to the Capital Region as a whole.

MIGRATION FLOWS

According to the 2012-2016 American Community Survey, Albany County had a net in migration of 325 residents during that 5-year time. Counties contributing the most inbound migration to Albany County included many 'downstate' counties such as Bronx, Suffolk, New York, Nassau, and Kings. Outbound counties, places where the most Albany County residents moved to, include Capital Region counties – Saratoga, Rensselaer, and Schenectady.

The figure below displays the net migration for Albany County. Counties represented in dark and light orange indicate counties with populations that moved into Albany County and counties in light and dark blue signifying areas where Albany County residents migrated to.

Figure 18: Total Net Migration Flows for Albany County, NY



Total Net Migration Flows for Albany County, NY

Source: U.S. Census Flows Mapper

INDUSTRY ANALYSIS

EMPLOYMENT BY SECTOR (2-DIGIT NAICS)

Albany County is home to approximately 245,000 jobs, having added about 4,600, an increase of 2%, over the last ten years from 2008 to 2018. There is an anticipated increase of 15,500 jobs (6%) in the next ten years to 2028. Not surprisingly, Government is the largest sector in Albany County, with 62,500 jobs.

CURRENT EMPLOYMENT BY SECTOR

The figure below shows the distribution of employment by 2-digit employment sectors within the county. The top five sectors for 2018 include:

- ◆ Government (62,500 jobs or 26% of all jobs)
- ◆ Healthcare and Social Assistance (35,000 jobs 14% of all jobs)
- ◆ Retail Trade (22,900 jobs or 9% of all jobs)
- ◆ Professional, Scientific and Technical Services (16,600 jobs or 7% of all jobs)
- ◆ Accommodation and Food Services (14,800 jobs or 6% of all jobs)

HISTORIC GROWTH

Between 2008 and 2018, the Health Care and Social Assistance sector employment outpaced that of any other sector in number of jobs, adding 4,300 for an increase of 14%. The following four sectors grew from 1,000-1,700 jobs in the same timeframe:

- ◆ Educational Services (grew by 1,700 or 19%)
- ◆ Administrative and Support and Waste Management and Remediation Services (grew by 1,400 or 12%)
- ◆ Accommodation and Food Services (grew by 1,300 or 10%)
- ◆ Finance and Insurance (grew by 1,000 or 8%)

Government experienced the biggest contraction in the past ten years, shedding 5,000 jobs, or 7%. Wholesale Trade lost 900 jobs (12%) and Professional, Scientific and Technical Services contracted by 850 (5%).

PROJECTED GROWTH

Healthcare and Social Assistance is the industry with the most anticipated growth, adding 6,000 jobs (growth rate of 17%) to Albany County. Administrative and Support and Waste Management and Remediation Services is anticipated to grow by 3,300 jobs (26%), Finance and Insurance will gain 1,900 jobs (14%).

Note that the Educational Services sector (NAICS 61), as categorized by EMSI, includes schools, colleges, universities and training centers, which are privately owned. All public schools are included in the Government sector (NAICS 90).

Employment by Sector, 2-Digit NAICS - Albany County									
NAICS	Description	2008 Jobs	2018 Jobs	2028 Jobs	2008 - 2018 Change	2008 - 2018 % Change	2018 - 2028 Change	2018 - 2028 % Change	Avg. Earnings Per Job*
11	Agriculture, Forestry, Fishing and Hunting	406	406	443	0	0%	37	9%	\$ 37,368
21	Mining, Quarrying, and Oil and Gas Extraction	94	363	533	269	286%	170	47%	\$ 91,099
22	Utilities	545	544	672	(1)	(0%)	128	24%	\$ 168,375
23	Construction	8,192	8,425	8,440	233	3%	15	0%	\$ 84,375
31	Manufacturing	7,869	7,703	7,301	(166)	(2%)	(402)	(5%)	\$ 88,227
42	Wholesale Trade	7,488	6,565	5,887	(923)	(12%)	(678)	(10%)	\$ 84,271
44	Retail Trade	22,880	22,855	22,853	(25)	(0%)	(2)	(0%)	\$ 37,345
48	Transportation and Warehousing	5,875	6,469	6,904	594	10%	435	7%	\$ 55,332
51	Information	5,177	5,558	5,757	381	7%	199	4%	\$ 100,840
52	Finance and Insurance	12,433	13,439	15,326	1,006	8%	1,887	14%	\$ 101,797
53	Real Estate and Rental and Leasing	3,692	3,701	3,931	9	0%	230	6%	\$ 56,075
54	Professional, Scientific, and Technical Services	17,423	16,572	17,473	(851)	(5%)	901	5%	\$ 97,758
55	Management of Companies and Enterprises	4,130	4,103	4,167	(27)	(1%)	64	2%	\$ 89,499
56	Administrative and Support and Waste Management and Remediation Services	11,293	12,677	15,999	1,384	12%	3,322	26%	\$ 41,194
61	Educational Services	9,153	10,867	12,539	1,714	19%	1,672	15%	\$ 62,636
62	Health Care and Social Assistance	30,206	34,539	40,563	4,333	14%	6,024	17%	\$ 59,313
71	Arts, Entertainment, and Recreation	2,035	2,607	2,905	572	28%	298	11%	\$ 27,364
72	Accommodation and Food Services	13,548	14,842	15,712	1,294	10%	870	6%	\$ 24,720
81	Other Services (except Public Administration)	10,601	10,415	10,929	(186)	(2%)	514	5%	\$ 42,151
90	Government	67,547	62,515	62,483	(5,032)	(7%)	(32)	(0%)	\$ 103,330
99	Unclassified Industry	204	201	39	(3)	(1%)	(162)	(81%)	\$ 43,570
Total		240,792	245,367	260,856	4,575	2%	15,489	6%	\$ 73,423

*Includes wages and supplements.

Source: EMSI Complete Employment 2019.1

EARNINGS

Average earnings per job (including wages and supplements) in Albany County was about \$73,400 in 2018. Sectors with the highest average earnings included Utilities (\$168,000), Government (\$103,000), and Finance and Insurance (\$102,000), and Information (\$101,000). Arts, Entertainment, and Recreation and Accommodation and Food Services were at the low end of the earnings spectrum, with average annual earnings of about \$27,400 and \$24,700.

Figure 19: Employment by Sector, 2-Digit NAICS - Albany County

Employment by Sector, 2-Digit NAICS - Albany County									
NAICS	Description	2008 Jobs	2018 Jobs	2028 Jobs	2008 - 2018 Change	2008 - 2018 % Change	2018 - 2028 Change	2018 - 2028 % Change	Avg. Earnings Per Job*
11	Agriculture, Forestry, Fishing and Hunting	406	406	443	0	0%	37	9%	\$ 37,368
21	Mining, Quarrying, and Oil and Gas Extraction	94	363	533	269	286%	170	47%	\$ 91,099
22	Utilities	545	544	672	(1)	(0%)	128	24%	\$ 168,375
23	Construction	8,192	8,425	8,440	233	3%	15	0%	\$ 84,375
31	Manufacturing	7,869	7,703	7,301	(166)	(2%)	(402)	(5%)	\$ 88,227
42	Wholesale Trade	7,488	6,565	5,887	(923)	(12%)	(678)	(10%)	\$ 84,271
44	Retail Trade	22,880	22,855	22,853	(25)	(0%)	(2)	(0%)	\$ 37,345
48	Transportation and Warehousing	5,875	6,469	6,904	594	10%	435	7%	\$ 55,332
51	Information	5,177	5,558	5,757	381	7%	199	4%	\$ 100,840
52	Finance and Insurance	12,433	13,439	15,326	1,006	8%	1,887	14%	\$ 101,797
53	Real Estate and Rental and Leasing	3,692	3,701	3,931	9	0%	230	6%	\$ 56,075
54	Professional, Scientific, and Technical Services	17,423	16,572	17,473	(851)	(5%)	901	5%	\$ 97,758
55	Management of Companies and Enterprises	4,130	4,103	4,167	(27)	(1%)	64	2%	\$ 89,499
56	Administrative and Support and Waste Management and Remediation Services	11,293	12,677	15,999	1,384	12%	3,322	26%	\$ 41,194
61	Educational Services	9,153	10,867	12,539	1,714	19%	1,672	15%	\$ 62,636
62	Health Care and Social Assistance	30,206	34,539	40,563	4,333	14%	6,024	17%	\$ 59,313
71	Arts, Entertainment, and Recreation	2,035	2,607	2,905	572	28%	298	11%	\$ 27,364
72	Accommodation and Food Services	13,548	14,842	15,712	1,294	10%	870	6%	\$ 24,720
81	Other Services (except Public Administration)	10,601	10,415	10,929	(186)	(2%)	514	5%	\$ 42,151
90	Government	67,547	62,515	62,483	(5,032)	(7%)	(32)	(0%)	\$ 103,330
99	Unclassified Industry	204	201	39	(3)	(1%)	(162)	(81%)	\$ 43,570
Total		240,792	245,367	260,856	4,575	2%	15,489	6%	\$ 73,423

*Includes wages and supplements.

Source: EMSI Complete Employment 2019.1

REGIONAL COMPARISON

Figure 20 and Figure 21 indicate the same information as Figure 19 but focus on different geographic locations: the 8-county Capital Region and New York State. By comparing geographic regions, we can see which industry trends are more localized or regional- or state-wide. Government, Health Care and Social Assistance, Retail Trade all share the largest market segments within each comparison geography.

Figure 20: Employment by Sector, 2-Digit NAICS - Capital Region

Employment by Sector, 2-Digit NAICS - Capital Region									
NAICS	Description	2008 Jobs	2018 Jobs	2028 Jobs	2008 - 2018 Change	2008 - 2018 % Change	2018 - 2028 Change	2018 - 2028 % Change	Avg. Earnings Per Job*
11	Agriculture, Forestry, Fishing and Hunting	4,717	4,226	4,250	(491)	(10%)	24	1%	\$ 39,498
21	Mining, Quarrying, and Oil and Gas Extraction	806	996	1,136	190	24%	140	14%	\$ 79,287
22	Utilities	1,664	1,942	2,401	278	17%	459	24%	\$ 164,272
23	Construction	27,635	26,505	27,977	(1,130)	(4%)	1,472	6%	\$ 68,177
31	Manufacturing	32,088	35,109	37,608	3,021	9%	2,499	7%	\$ 97,194
42	Wholesale Trade	15,075	14,969	15,404	(106)	(1%)	435	3%	\$ 81,687
44	Retail Trade	62,446	60,127	60,514	(2,319)	(4%)	387	1%	\$ 36,021
48	Transportation and Warehousing	13,453	14,431	15,354	978	7%	923	6%	\$ 56,747
51	Information	11,177	9,902	9,960	(1,275)	(11%)	58	1%	\$ 88,850
52	Finance and Insurance	23,867	23,678	25,443	(189)	(1%)	1,765	7%	\$ 95,692
53	Real Estate and Rental and Leasing	7,452	7,547	8,400	95	1%	853	11%	\$ 51,348
54	Professional, Scientific, and Technical Services	36,774	35,877	38,949	(897)	(2%)	3,072	9%	\$ 93,594
55	Management of Companies and Enterprises	7,651	7,515	7,444	(136)	(2%)	(71)	(1%)	\$ 89,673
56	Administrative and Support and Waste Management and Remediation Services	22,182	23,384	27,140	1,202	5%	3,756	16%	\$ 41,270
61	Educational Services	19,694	22,570	25,609	2,876	15%	3,039	13%	\$ 53,635
62	Health Care and Social Assistance	72,960	81,797	95,225	8,837	12%	13,428	16%	\$ 55,501
71	Arts, Entertainment, and Recreation	8,886	10,175	10,679	1,289	15%	504	5%	\$ 26,422
72	Accommodation and Food Services	36,873	44,890	50,579	8,017	22%	5,689	13%	\$ 25,129
81	Other Services (except Public Administration)	23,386	23,792	25,706	406	2%	1,914	8%	\$ 35,255
90	Government	126,587	118,780	121,819	(7,807)	(6%)	3,039	3%	\$ 91,428
99	Unclassified Industry	493	568	106	75	15%	(462)	(81%)	\$ 38,437
TOTAL		555,867	568,781	611,702	12,914	2%	42,921	8%	\$ 65,736

*Includes wages and supplements.

Source: EMSI Complete Employment 2019.1

Figure 21: Employment by Sector, 2-Digit NAICS - NYS

Employment by Sector, 2-Digit NAICS - NYS									
NAICS	Description	2008 Jobs	2018 Jobs	2028 Jobs	2008 - 2018 Change	2008 - 2018 % Change	2018 - 2028 Change	2018 - 2028 % Change	Avg. Earnings Per Job*
11	Agriculture, Forestry, Fishing and Hunting	42,113	44,132	45,934	2,019	5%	1,802	4%	\$ 39,200
21	Mining, Quarrying, and Oil and Gas Extraction	5,654	4,697	4,905	(957)	(17%)	208	4%	\$ 84,611
22	Utilities	38,775	38,196	42,817	(579)	(1%)	4,621	12%	\$ 162,316
23	Construction	465,177	479,138	541,398	13,961	3%	62,260	13%	\$ 76,055
31	Manufacturing	544,413	453,481	423,861	(90,932)	(17%)	(29,620)	(7%)	\$ 83,028
42	Wholesale Trade	361,492	342,813	343,362	(18,679)	(5%)	549	0%	\$ 98,546
44	Retail Trade	936,871	967,657	994,569	30,786	3%	26,912	3%	\$ 42,348
48	Transportation and Warehousing	280,471	316,445	346,260	35,974	13%	29,815	9%	\$ 59,483
51	Information	278,261	290,565	321,618	12,304	4%	31,053	11%	\$ 135,861
52	Finance and Insurance	566,028	546,856	572,153	(19,172)	(3%)	25,297	5%	\$ 261,294
53	Real Estate and Rental and Leasing	218,246	229,459	247,006	11,213	5%	17,547	8%	\$ 77,252
54	Professional, Scientific, and Technical Services	684,402	772,936	866,871	88,534	13%	93,935	12%	\$ 119,082
55	Management of Companies and Enterprises	131,444	144,379	150,455	12,935	10%	6,076	4%	\$ 173,182
56	Administrative and Support and Waste Management and Remediation Services	473,427	547,541	619,185	74,114	16%	71,644	13%	\$ 58,703
61	Educational Services	378,171	453,237	531,524	75,066	20%	78,287	17%	\$ 60,821
62	Health Care and Social Assistance	1,342,444	1,612,665	1,982,780	270,221	20%	370,115	23%	\$ 60,739
71	Arts, Entertainment, and Recreation	189,593	226,957	254,160	37,364	20%	27,203	12%	\$ 54,237
72	Accommodation and Food Services	585,367	791,110	918,154	205,743	35%	127,044	16%	\$ 32,369
81	Other Services (except Public Administration)	445,061	491,927	541,376	46,866	11%	49,449	10%	\$ 39,863
90	Government	1,548,808	1,481,278	1,601,002	(67,530)	(4%)	119,724	8%	\$ 97,600
99	Unclassified Industry	22,255	22,043	4,286	(212)	(1%)	(17,757)	(81%)	\$ 70,982
TOTAL		9,538,477	10,257,510	11,353,678	719,033	8%	1,096,168	11%	\$ 83,302

*Includes wages and supplements.

Source: EMSI Complete Employment 2019.1

HIGHLY CONCENTRATED SECTORS

Location quotient (LQ) is a measure of industry concentration, indicating how concentrated a certain sector in a given area of study, relative to the nation. It can reveal what makes a particular region “unique” in comparison with the national average. An LQ greater than 1 indicates that sector employment in the study area is more concentrated than it is as the national level.

In Albany County, the sector with highest concentration is Educational Services with an LQ of 1.73, meaning that the share of Educational Services employment in Albany County is 1.73 times greater than its share nationally. Other concentrated sectors include Government (LQ = 1.69), Finance and Insurance (LQ = 1.36), and Information (LQ = 1.23).

Figure 22: 2018 Location Quotient by Sector, 2-Digit NAICS

2018 Location Quotient by Sector, 2-Digit NAICS				
NAICS	Description	Albany County LQ	Capital Region LQ	NYS LQ
11	Agriculture, Forestry, Fishing and Hunting	0.14	0.63	0.36
21	Mining, Quarrying, and Oil and Gas Extraction	0.36	0.43	0.11
22	Utilities	0.64	0.99	1.08
23	Construction	0.62	0.84	0.84
31	Manufacturing	0.40	0.78	0.56
42	Wholesale Trade	0.72	0.71	0.90
44	Retail Trade	0.92	1.04	0.93
48	Transportation and Warehousing	0.74	0.71	0.86
51	Information	1.23	0.95	1.54
52	Finance and Insurance	1.36	1.03	1.32
53	Real Estate and Rental and Leasing	0.89	0.79	1.33
54	Professional, Scientific, and Technical Services	1.04	0.97	1.16
55	Management of Companies and Enterprises	1.17	0.93	0.99
56	Administrative and Support and Waste Management and Remediation Services	0.83	0.66	0.85
61	Educational Services	1.73	1.55	1.72
62	Health Care and Social Assistance	1.11	1.14	1.24
71	Arts, Entertainment, and Recreation	0.61	1.03	1.28
72	Accommodation and Food Services	0.70	0.92	0.90
81	Other Services (except Public Administration)	0.89	0.88	1.01
90	Government	1.69	1.39	0.96
99	Unclassified Industry	0.60	0.73	1.57

Source: EMSI Complete Employment 2019.1

REGIONAL COMPARISON OF EMPLOYMENT SHARE BY SECTOR

The figure below summarizes each sector's share of total employment in Albany County, the Capital Region, New York State, and the United States. Notably, the proportion of Government jobs in Albany County is more than 10 percentage points higher than that of the state or nation. In addition, the county has a lower proportion of manufacturing jobs than the other geographies. The remainder of the comparison geographies have a relatively similar proportion of employment share by sector.

Figure 23: 2018 Employment Share by Sector, Regional Comparison

2018 Employment Share by Sector, Regional Comparison					
NAICS	Description	Albany County	Capital Region	NYS	US
11	Agriculture, Forestry, Fishing and Hunting	0.2%	0.7%	0.4%	1.2%
21	Mining, Quarrying, and Oil and Gas Extraction	0.1%	0.2%	0.0%	0.4%
22	Utilities	0.2%	0.3%	0.4%	0.3%
23	Construction	3.4%	4.7%	4.7%	5.5%
31	Manufacturing	3.1%	6.2%	4.4%	7.9%
42	Wholesale Trade	2.7%	2.6%	3.3%	3.7%
44	Retail Trade	9.3%	10.6%	9.4%	10.2%
48	Transportation and Warehousing	2.6%	2.5%	3.1%	3.6%
51	Information	2.3%	1.7%	2.8%	1.8%
52	Finance and Insurance	5.5%	4.2%	5.3%	4.0%
53	Real Estate and Rental and Leasing	1.5%	1.3%	2.2%	1.7%
54	Professional, Scientific, and Technical Services	6.8%	6.3%	7.5%	6.5%
55	Management of Companies and Enterprises	1.7%	1.3%	1.4%	1.4%
56	Administrative and Support and Waste Management and Remediation Services	5.2%	4.1%	5.3%	6.2%
61	Educational Services	4.4%	4.0%	4.4%	2.6%
62	Health Care and Social Assistance	14.1%	14.4%	15.7%	12.6%
71	Arts, Entertainment, and Recreation	1.1%	1.8%	2.2%	1.7%
72	Accommodation and Food Services	6.0%	7.9%	7.7%	8.6%
81	Other Services (except Public Administration)	4.2%	4.2%	4.8%	4.8%
90	Government	25.5%	20.9%	14.4%	15.1%
99	Unclassified Industry	0.1%	0.1%	0.2%	0.1%
		100.0%	100.0%	100.0%	100.0%

Source: EMSI Complete Employment 2019.1

HISTORIC EMPLOYMENT GROWTH BY SECTOR

Economy-wide, employment in Albany County and the Capital Region expanded by 2% over the last decade. New York and the nation increased by 8% and 7% respectively. Sectors where employment growth in Albany County significantly outpaced that of the comparison geographies include: Arts, Entertainment, and Recreation; Finance and Insurance; and Information. An outlier, the Mining, Quarrying, and Oil and Gas Extraction industry grew by 286% in Albany County due to a small jump in number of jobs - from about 90 in 2008 to 360 in 2018. Albany County underperformed in Wholesale Trade, in which it lost 12% of jobs compared to losing 1% in the Capital Region, 5% in the state and 2% in the nation.

The sub industry with the largest growth in the Mining, Quarrying, and Oil and Gas Extraction industry is NAICS 21232 Sand, Gravel, Clay, and Ceramic and Refractory Minerals Mining and Quarrying. Within Albany County, this can be attributed to the Lafarge Quarry (<https://blog.timesunion.com/business/lafarge-to-upgrade-ravena-cement-plant/4157/>).

Figure 24: 2008-2018 Percent Change in Employment, Regional Comparison

2008-2018 Percent Change in Employment, Regional Comparison					
NAICS	Description	Albany County	Capital Region	NYS	US
11	Agriculture, Forestry, Fishing and Hunting	0%	(10%)	5%	2%
21	Mining, Quarrying, and Oil and Gas Extraction	286%	24%	(17%)	(9%)
22	Utilities	(0%)	17%	(1%)	0%
23	Construction	3%	(4%)	3%	(4%)
31	Manufacturing	(2%)	9%	(17%)	(6%)
42	Wholesale Trade	(12%)	(1%)	(5%)	(2%)
44	Retail Trade	(0%)	(4%)	3%	3%
48	Transportation and Warehousing	10%	7%	13%	18%
51	Information	7%	(11%)	4%	(5%)
52	Finance and Insurance	8%	(1%)	(3%)	3%
53	Real Estate and Rental and Leasing	0%	1%	5%	2%
54	Professional, Scientific, and Technical Services	(5%)	(2%)	13%	15%
55	Management of Companies and Enterprises	(1%)	(2%)	10%	22%
56	Administrative and Support and Waste Management and Remediation Services	12%	5%	16%	14%
61	Educational Services	19%	15%	20%	22%
62	Health Care and Social Assistance	14%	12%	20%	23%
71	Arts, Entertainment, and Recreation	28%	15%	20%	18%
72	Accommodation and Food Services	10%	22%	35%	20%
81	Other Services (except Public Administration)	(2%)	2%	11%	3%
90	Government	(7%)	(6%)	(4%)	(1%)
99	Unclassified Industry	(1%)	15%	(1%)	7%
	All Sectors	2%	2%	8%	7%

Source: EMSI Complete Employment 2019.1

AVERAGE EARNINGS BY SECTOR

Average earnings per job in Albany County (\$73,000) are higher than the Capital Region (\$66,000) and United States (\$65,000) but are lower than New York (\$83,000).

As identified prior, Albany County's top sectors, by number of jobs, are Government, Health Care and Social Assistance, and Retail Trade. Of the comparison geographies, Government average earnings are highest in Albany County, at \$103,000. Health Care and Social Assistance average earnings in the county are similar among all comparison regions and range from a low of \$56,000 in the Capital Region to a high of \$61,000 in New York State. Retail Trade average earnings are \$37,000 in the county; \$36,000 in the Capital Region; \$42,000 in the state; and \$37,000 nation-wide.

Figure 25: 2018 Average Earnings*, Regional Comparison

2018 Average Earnings*, Regional Comparison					
NAICS	Description	Albany County	Capital Region	NYS	US
11	Agriculture, Forestry, Fishing and Hunting	\$ 37,368	\$ 39,498	\$ 39,200	\$ 38,411
21	Mining, Quarrying, and Oil and Gas Extraction	\$ 91,099	\$ 79,287	\$ 84,611	\$ 123,544
22	Utilities	\$ 168,375	\$ 164,272	\$ 162,316	\$ 144,608
23	Construction	\$ 84,375	\$ 68,177	\$ 76,055	\$ 64,146
31	Manufacturing	\$ 88,227	\$ 97,194	\$ 83,028	\$ 83,752
42	Wholesale Trade	\$ 84,271	\$ 81,687	\$ 98,546	\$ 88,474
44	Retail Trade	\$ 37,345	\$ 36,021	\$ 42,348	\$ 37,297
48	Transportation and Warehousing	\$ 55,332	\$ 56,747	\$ 59,483	\$ 62,669
51	Information	\$ 100,840	\$ 88,850	\$ 135,861	\$ 121,885
52	Finance and Insurance	\$ 101,797	\$ 95,692	\$ 261,294	\$ 123,050
53	Real Estate and Rental and Leasing	\$ 56,075	\$ 51,348	\$ 77,252	\$ 60,977
54	Professional, Scientific, and Technical Services	\$ 97,758	\$ 93,594	\$ 119,082	\$ 100,944
55	Management of Companies and Enterprises	\$ 89,499	\$ 89,673	\$ 173,182	\$ 142,288
56	Administrative and Support and Waste Management and Remediation Services	\$ 41,194	\$ 41,270	\$ 58,703	\$ 44,963
61	Educational Services	\$ 62,636	\$ 53,635	\$ 60,821	\$ 48,341
62	Health Care and Social Assistance	\$ 59,313	\$ 55,501	\$ 60,739	\$ 59,328
71	Arts, Entertainment, and Recreation	\$ 27,364	\$ 26,422	\$ 54,237	\$ 40,479
72	Accommodation and Food Services	\$ 24,720	\$ 25,129	\$ 32,369	\$ 24,294
81	Other Services (except Public Administration)	\$ 42,151	\$ 35,255	\$ 39,863	\$ 33,441
90	Government	\$ 103,330	\$ 91,428	\$ 97,600	\$ 75,652
99	Unclassified Industry	\$ 43,570	\$ 38,437	\$ 70,982	\$ 66,456
Average		\$ 73,423	\$ 65,736	\$ 83,302	\$ 65,133

*Includes wages and supplements.

Source: EMSI Complete Employment 2019.1

GROSS REGIONAL PRODUCT BY SECTOR (2-DIGIT NAICS)

Within Albany County, the industries contributing the most to gross regional product (GRP) in order are Government (28% of total GRP); Finance and Insurance (12%); Health Care and Social Assistance (8%); and Professional, Scientific, and Technical Services (8%).

As Figure 26 illustrates, these trends generally follow the Capital Region and state. However, while Government is the leading contributor to the county and the region's GRP, it is second to Finance and Insurance in the state. Additionally, Manufacturing contributes to more than twice as much to the Capital Region's GRP as the county or state.

Figure 26: Gross Regional Product by 2-Digit Sector

Gross Regional Product by 2-Digit Sector					
NAICS	Description	Albany County GRP	% of Total GRP Albany County	% of Total GRP Capital Region	% of Total GRP NYS
11	Agriculture, Forestry, Fishing and Hunting	\$ 40,681,627	0.1%	0.6%	0.3%
21	Mining, Quarrying, and Oil and Gas Extraction	\$ 99,784,890	0.3%	0.5%	0.1%
22	Utilities	\$ 460,816,545	1.5%	2.5%	2.0%
23	Construction	\$ 1,026,913,679	3.4%	4.1%	3.6%
31	Manufacturing	\$ 1,644,262,139	5.5%	13.1%	5.8%
42	Wholesale Trade	\$ 1,419,667,785	4.7%	5.2%	5.8%
44	Retail Trade	\$ 1,577,044,214	5.3%	6.5%	5.3%
48	Transportation and Warehousing	\$ 537,471,594	1.8%	1.9%	2.5%
51	Information	\$ 1,931,056,389	6.4%	4.7%	8.7%
52	Finance and Insurance	\$ 3,494,476,039	11.7%	9.1%	17.0%
53	Real Estate and Rental and Leasing	\$ 906,842,105	3.0%	3.0%	5.2%
54	Professional, Scientific, and Technical Services	\$ 2,503,285,649	8.3%	7.9%	9.9%
55	Management of Companies and Enterprises	\$ 454,734,525	1.5%	1.3%	2.1%
56	Administrative and Support and Waste Management and Remediation Services	\$ 798,090,189	2.7%	2.3%	3.0%
61	Educational Services	\$ 922,965,566	3.1%	2.5%	2.5%
62	Health Care and Social Assistance	\$ 2,477,553,524	8.3%	8.4%	8.3%
71	Arts, Entertainment, and Recreation	\$ 159,489,173	0.5%	0.9%	1.7%
72	Accommodation and Food Services	\$ 619,179,379	2.1%	3.1%	3.0%
81	Other Services (except Public Administration)	\$ 561,609,698	1.9%	1.8%	1.8%
90	Government	\$ 8,354,302,887	27.9%	20.7%	11.5%
99	Unclassified Industry	Insf. Data	Insf. Data	Insf. Data	Insf. Data
Total		\$ 29,990,227,596	100.0%	100.0%	100.0%

Source: EMSI Complete Employment 2019.1, Camoin Associates

TOP INDUSTRIES (4-DIGIT NAICS)

Figure 27 shows the top 25 industries by employment for Albany County. Five of which stem from the Government sector, four from the Health Care and Social Assistance sector, and four from the Professional, Scientific, and Technical Services sector. Not surprisingly, State Government, Excluding Education and Hospitals, has the most jobs in the county, with over 37,000 in 2018 (down 8% over the last 10 years). Next highest are the Restaurants and Other Eating Places and General Medical and Surgical Hospitals; each have around 11,000 jobs and have expanded in the last 10 years. Close to 40% of the top 25 industry sectors have seen a decline in the number of jobs from 2008 to 2018. Those sectors that have seen growth and have an LQ of above 1.5 include the General Medical and Surgical Hospitals; Insurance Carriers; and Colleges, Universities, and Professional Schools sectors.

Figure 27: Top 25 Industries by Employment, 4-Digit NAICS – Albany County

Top 25 Industries by Employment, 4-Digit NAICS - Albany County							
NAICS	Description	2008 Jobs	2018 Jobs	2008 - 2018 Change	2008 - 2018 % Change	2018 Location Quotient	Avg. Earnings Per Job
9029	State Government, Excluding Education and Hospitals	40,680	37,243	(3,437)	(8%)	10.87	\$ 113,295
7225	Restaurants and Other Eating Places	9,679	11,173	1,494	15%	0.69	\$ 23,363
6221	General Medical and Surgical Hospitals	8,720	10,861	2,141	25%	1.53	\$ 63,877
9036	Education and Hospitals (Local Government)	8,338	7,479	(859)	(10%)	0.58	\$ 92,330
5241	Insurance Carriers	6,206	7,276	1,070	17%	3.81	\$ 98,981
6113	Colleges, Universities, and Professional Schools	6,290	7,163	873	14%	2.39	\$ 71,913
9039	Local Government, Excluding Education and Hospitals	7,816	7,081	(735)	(9%)	0.82	\$ 82,142
6211	Offices of Physicians	4,562	5,491	929	20%	1.37	\$ 111,801
5613	Employment Services	5,246	5,489	243	5%	1.00	\$ 43,659
9011	Federal Government, Civilian	5,286	5,137	(149)	(3%)	1.18	\$ 106,964
9026	Education and Hospitals (State Government)	4,516	4,908	392	9%	1.04	\$ 79,570
4451	Grocery Stores	3,559	4,205	646	18%	1.02	\$ 29,111
5511	Management of Companies and Enterprises	4,130	4,103	(27)	(1%)	1.17	\$ 89,499
5617	Services to Buildings and Dwellings	2,685	3,947	1,262	47%	0.90	\$ 26,077
6241	Individual and Family Services	2,913	3,683	770	26%	0.94	\$ 30,283
5417	Scientific Research and Development Services	4,129	3,409	(720)	(17%)	3.29	\$ 85,192
5411	Legal Services	3,537	3,225	(312)	(9%)	1.59	\$ 93,425
5415	Computer Systems Design and Related Services	2,019	3,222	1,203	60%	0.95	\$ 139,000
2382	Building Equipment Contractors	2,790	3,054	264	9%	0.85	\$ 92,685
5242	Agencies, Brokerages, and Other Insurance Related Activities	2,129	2,864	735	35%	1.21	\$ 97,356
5413	Architectural, Engineering, and Related Services	2,237	2,469	232	10%	1.06	\$ 102,817
4411	Automobile Dealers	1,922	2,362	440	23%	1.17	\$ 74,245
6231	Nursing Care Facilities (Skilled Nursing Facilities)	2,367	2,307	(60)	(3%)	0.94	\$ 40,907
6111	Elementary and Secondary Schools	1,791	2,063	272	15%	1.19	\$ 53,628
4481	Clothing Stores	2,202	2,055	(147)	(7%)	1.27	\$ 18,007

Source: EMSI Complete Employment 2019.1

REGIONAL COMPARISON OF TOP INDUSTRIES

The figures below display the top 25 industries for the Capital Region and the state. The Capital Region and Albany County share all but four of the same top industries; these include the Residential Intellectual and Developmental Disability, Mental Health and Substance Abuse Facilities; Other Amusement and Recreation Industries; General Merchandise Stores, including Warehouse Clubs and Supercenters; and Traveler Accommodation. New York and Albany County share 16 of the same top industries encompassing sectors in education, health care, government, grocery, and retail.

Figure 28: Top 25 Industries by Employment, 4-Digit NAICS - Capital Region

Top 25 Industries by Employment, 4-Digit NAICS - Capital Region							
NAICS	Description	2008 Jobs	2018 Jobs	2008 - 2018 Change	2008 - 2018 % Change	2018 Location Quotient	Avg. Earnings Per Job
9029	State Government, Excluding Education and Hospitals	49,430	46,916	(2,514)	(5%)	5.91	\$ 112,616
7225	Restaurants and Other Eating Places	26,465	32,679	6,214	23%	0.87	\$ 22,705
9036	Education and Hospitals (Local Government)	34,493	32,256	(2,237)	(6%)	1.07	\$ 80,851
9039	Local Government, Excluding Education and Hospitals	25,560	22,479	(3,081)	(12%)	1.13	\$ 72,038
6221	General Medical and Surgical Hospitals	19,846	21,572	1,726	9%	1.31	\$ 64,745
6113	Colleges, Universities, and Professional Schools	13,576	15,187	1,611	12%	2.19	\$ 60,642
4451	Grocery Stores	11,612	11,914	302	3%	1.24	\$ 28,782
6211	Offices of Physicians	9,462	10,505	1,043	11%	1.13	\$ 103,515
5241	Insurance Carriers	10,433	10,097	(336)	(3%)	2.28	\$ 96,108
5617	Services to Buildings and Dwellings	6,752	8,740	1,988	29%	0.86	\$ 28,098
5417	Scientific Research and Development Services	9,437	8,512	(925)	(10%)	3.54	\$ 111,265
2382	Building Equipment Contractors	7,569	8,508	939	12%	1.02	\$ 78,098
5613	Employment Services	8,858	8,474	(384)	(4%)	0.67	\$ 41,961
6241	Individual and Family Services	6,644	8,236	1,592	24%	0.91	\$ 32,152
6231	Nursing Care Facilities (Skilled Nursing Facilities)	7,316	7,641	325	4%	1.35	\$ 41,953
5511	Management of Companies and Enterprises	7,651	7,515	(136)	(2%)	0.93	\$ 89,673
7211	Traveler Accommodation	5,781	7,422	1,641	28%	1.09	\$ 33,545
9011	Federal Government, Civilian	7,487	7,089	(398)	(5%)	0.70	\$ 98,961
9026	Education and Hospitals (State Government)	6,039	6,427	388	6%	0.59	\$ 73,435
4523	General Merchandise Stores, including Warehouse Clubs and Supercenters	4,744	6,004	1,260	27%	0.87	\$ 29,595
5415	Computer Systems Design and Related Services	4,386	5,820	1,434	33%	0.74	\$ 121,830
5242	Agencies, Brokerages, and Other Insurance Related Activities	4,433	5,693	1,260	28%	1.04	\$ 88,007
7139	Other Amusement and Recreation Industries	4,812	5,681	869	18%	1.13	\$ 22,880
5413	Architectural, Engineering, and Related Services	5,671	5,607	(64)	(1%)	1.04	\$ 102,614
6232	Residential Intellectual and Developmental Disability, Mental Health, and Substance Abuse Facilities	4,287	5,552	1,265	30%	2.47	\$ 37,430

Source: EMSI Complete Employment 2019.1

Figure 29: Top 25 Industries by Employment, 4-Digit NAICS - NYS

Top 25 Industries by Employment, 4-Digit NAICS - NYS							
NAICS	Description	2008 Jobs	2018 Jobs	2008 - 2018 Change	2008 - 2018 % Change	2018 Location Quotient	Avg. Earnings Per Job
9036	Education and Hospitals (Local Government)	621,286	603,540	(17,746)	(3%)	1.11	\$ 94,857
7225	Restaurants and Other Eating Places	428,239	594,507	166,268	39%	0.88	\$ 28,775
9039	Local Government, Excluding Education and Hospitals	485,414	463,480	(21,934)	(5%)	1.29	\$ 100,402
6221	General Medical and Surgical Hospitals	322,859	351,057	28,198	9%	1.18	\$ 91,758
6113	Colleges, Universities, and Professional Schools	224,849	261,319	36,470	16%	2.09	\$ 69,269
6241	Individual and Family Services	196,586	240,437	43,851	22%	1.48	\$ 34,882
6216	Home Health Care Services	101,522	223,554	122,032	120%	2.35	\$ 34,307
5613	Employment Services	144,104	181,038	36,934	26%	0.79	\$ 61,598
4451	Grocery Stores	166,761	180,365	13,604	8%	1.04	\$ 31,582
6211	Offices of Physicians	151,169	167,817	16,648	11%	1.00	\$ 107,008
9029	State Government, Excluding Education and Hospitals	170,251	153,645	(16,606)	(10%)	1.07	\$ 115,247
2382	Building Equipment Contractors	132,845	150,988	18,143	14%	1.00	\$ 83,927
5511	Management of Companies and Enterprises	131,444	144,379	12,935	10%	0.99	\$ 173,182
5617	Services to Buildings and Dwellings	121,016	144,303	23,287	19%	0.79	\$ 38,303
5411	Legal Services	152,685	143,904	(8,781)	(6%)	1.69	\$ 136,094
6231	Nursing Care Facilities (Skilled Nursing Facilities)	129,155	122,140	(7,015)	(5%)	1.19	\$ 51,074
5415	Computer Systems Design and Related Services	89,556	121,427	31,871	36%	0.86	\$ 137,628
9011	Federal Government, Civilian	127,023	116,681	(10,342)	(8%)	0.64	\$ 108,237
5231	Securities and Commodity Contracts Intermediation and Brokerage	138,140	114,098	(24,042)	(17%)	3.91	\$ 453,831
5221	Depository Credit Intermediation	103,271	112,152	8,881	9%	1.03	\$ 147,308
6111	Elementary and Secondary Schools	85,256	108,356	23,100	27%	1.49	\$ 55,437
5311	Lessors of Real Estate	106,218	106,593	375	0%	2.07	\$ 69,427
6244	Child Day Care Services	102,693	104,936	2,243	2%	1.34	\$ 26,761
5416	Management, Scientific, and Technical Consulting Services	70,743	101,042	30,299	43%	0.90	\$ 132,867
5412	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	99,258	100,867	1,609	2%	1.35	\$ 99,745

Source: EMSI Complete Employment 2019.1

EMERGING INDUSTRIES

CYBERSECURITY

Using a cluster of industries identified in the 2015 report *San Diego's Cybersecurity Industry*, and adjusted for Albany County, the following table indicates the past and future industry growth among industries which focus on cybersecurity.¹

Figure 30: Cybersecurity Industries, 4-Digit NAICS- Albany County

Cybersecurity Industries, 4-Digit NAICS - Albany County										
NAICS	Description	2008 Jobs	2018 Jobs	2028 Jobs	2008 - 2018 Change	2008 - 2018 % Change	2018 - 2028 Change	2018 - 2028 % Change	Avg. Earnings Per Job	2018 Location Quotient
3342	Communications Equipment Manufacturing	0	11	119	11	Insf. Data	17	17%	\$ 76,379	0.09
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	528	466	133	(62)	(12%)	(10)	(7%)	\$ 86,167	0.76
5112	Software Publishers	170	746	1,144	576	339%	398	53%	\$181,060	1.26
5179	Other Telecommunications	35	102	1,256	67	191%	49	4%	\$ 54,882	0.80
5182	Data Processing, Hosting, and Related Services	639	1,207	2,843	568	89%	374	15%	\$101,524	2.42
5242	Agencies, Brokerages, and Other Insurance Related Activities	2,129	2,864	3,572	735	35%	708	25%	\$ 97,356	1.21
5413	Architectural, Engineering, and Related Services	2,237	2,469	894	232	10%	59	7%	\$102,817	1.06
5414	Specialized Design Services	177	143	462	(34)	(19%)	(4)	(1%)	\$ 37,230	0.32
5415	Computer Systems Design and Related Services	2,019	3,222	3,999	1,203	60%	777	24%	\$139,000	0.95
5416	Management, Scientific, and Technical Consulting Services	1,899	1,257	952	(642)	(34%)	(185)	(16%)	\$ 87,783	0.47
5419	Other Professional, Scientific, and Technical Services	823	835	1,277	12	1%	20	2%	\$ 52,466	0.63
5616	Investigation and Security Services	1,204	1,137	75	(67)	(6%)	(12)	(14%)	\$ 40,876	0.78
5619	Other Support Services	379	248	203	(131)	(35%)	(45)	(18%)	\$ 27,994	0.50
8112	Electronic and Precision Equipment Repair and Maintenance	82	87	16	5	6%	5	45%	\$ 53,184	0.45
		12,320	14,796	16,947	2,476	20%	2,151	15%	\$101,542	

Source: EMSI Complete Employment 2019.1

While not all sub-industries show growth, overall this sector has a positive trajectory towards expansion. These data indicate a historic growth of 20%, or 2,500 jobs, and a projected growth of 15%, or 2,200 jobs. Average earnings per worker within these industries is \$102,000.

Extrapolating a key sub-industry from this list, IT Consulting (NAICS 54151) shows continued growth in this industry, slightly outpacing the nation as a whole. From 2017 to 2022, the IT Consulting industry in New York is projected to grow at an annualized rate of 2.8% to \$25.5 billion, with 2.7% during 2018 alone. External growth drivers from this industry include demand from finance and insurance companies; the number of businesses in NYS; the amount of private investment in computers and software; corporate profit; and government consumption and investment. In addition, more banks are expected to hire IT consultants to manage their online platforms. Furthermore, the increased threat of cybersecurity threats will likely increase demand for IT consulting.²

¹ <https://sdccoe.org/wp-content/uploads/2015/01/CCOE-EIS-2016-.pdf> The following NAICS industries were removed for the Albany County Analysis: NAICS 3366 Ship and Boat Building and NAICS 5615 Travel Arrangement and Reservation Services.

² <https://clients1.ibisworld.com/reports/us/industry/industryoutlook.aspx?entid=12141&collection=b421fa5b-0400-49d4-abbc-a0466a7d134d>

Cybersecurity employment is difficult to measure precisely because job skills and responsibility cut across multiple potential occupations including IT and management analysts, network administrators, software and application developers, and other IT related jobs. However, one specific occupation that is dedicated to cybersecurity related functions is Information Security Analysts (SOC 15-1122). This occupation is responsible for planning, implementing, upgrading, or monitoring security measures for the protection of computer networks and information.

There are currently 160 Information Security Analyst jobs in Albany County, which represents a regional concentration per capita of 0.90 times the national job concentration or 10% fewer in the region than expected (i.e. one would expect to see about 177 jobs in Albany County). This means the lower-than-expected supply can make it difficult to find candidates. Talent is 11% cheaper in Albany County compared to the nation, however, cost of living is 11% higher. Demographics for Information Security Analysts in Albany County lack diversity – 76% male, 77% white.

The gap between expected and actual employment is projected to narrow over the next 5 years. Information Security Analysts increased by 53 from 2013-2018 (50.1%), outpacing the national growth rate of 40.1%. The occupation is projected to increase by 27 from 2018-2023 (16.8%), outpacing the national projected growth rate of 14.9%.

There are an increasing number of Cybersecurity-focused educational and workforce development programs throughout Albany County, including:

- ◆ **University at Albany College of Emergency Preparedness, Homeland Security and Cybersecurity |** Offers academic programs from a bachelor's degree to a doctorate. Requires an internship for on-the-ground training.
- ◆ **Center for Information Forensics and Assurance at the University at Albany |** Run through the College of Business, the CIFA aims to “inform, train, and educate students, public employees, and citizens in information privacy, security, assets, and infrastructure protection.”³ They are in the process of creating a Cyber Innovation Lab which will support learning to both students and executives. They also host a number of clubs for professional development of students.
- ◆ **NYS Office of Information Technology Services |** Directed with overseeing the security 50 state agencies; employee and citizen accounts; and phones and computers and virtual desktop connections. Provides some resources to citizens, businesses, employees, and local government officials. Hosts an annual NYS Cyber Security Conference.
- ◆ **National Cybersecurity Institute (NCI) at Excelsior College |** Offers degree programs for students, and work to develop effective cybersecurity practice in the health care, finance, utilities/energy, telecommunications, and education/training sectors. They have a peer-reviewed journal, webinar trainings, and other resources available.

³ <https://www.albany.edu/cifa/about.php>

- ◆ **The College of Saint Rose Undergraduate Degree in Cybersecurity** | Strictly focused on cybersecurity, with a strong foundation in computer science, criminal justice, and business.
- ◆ **Pathways in Technology Early College High School (P-TECH)** | Watervliet Junior-Senior High School focuses on STEM project-based, hands-on learning. Students can earn both a high school diploma and associate degree, setting them on pathway in computer science, information systems, and cybersecurity.

However, these resources are not currently meeting the need of the cybersecurity industry workforce needs. According to Cyber Seek™, a tool designed to help close the cybersecurity workforce gap, NYS currently has over 14,000 opening for cybersecurity jobs, and has a “very low” cybersecurity workforce supply to demand ratio (3:1).⁴ This indicates the need for additional workforce training programs with non-degree training programs and more apprentice opportunities, as well as communicating the career opportunities to potential students and their early-educators.

Given the historic and projected growth of this industry, the favorable outlook state-wide, the high earnings per job, and the potential for workforce development, the cybersecurity industry could prove to be a valuable economic driver. Albany County’s strengths in government, finance, healthcare, and insurance make it a particularly attractive market opportunity for cybersecurity businesses. Developing the talent pipeline will be critical to success in growing and supporting the cybersecurity industry.

CLEAN & GREEN ENERGY

In 2016 New York State established a Clean Energy Standard that includes a Renewable Energy Mandate, stating that 50% of the State’s energy must come from renewable sources by 2030. Most recently, the NYS Senate passed S6599, the climate leadership and protection act which will add up to a 100% reduction in greenhouse gas emissions from man-made sources by 2050.⁵ These mandates have set the stage for the burgeoning and growing industry across the state. Within Albany County, the number of jobs produced by clean and green energy sectors is gaining traction, and there are a vast number of workforce development training programs that exist. In addition, in 2017 Albany County became the he first municipality in the Capital Region to earn NYSERDA’s Clean Energy Community designation.⁶

Within the state, there is a big push toward renewable energy, in particular wind energy and solar as identified in the October 2017 report *Accelerating Large-Scale Wind and Solar Energy in New York* authored by The Nature Conservancy and the Alliance for Clean Energy New York.⁷ The report outlines 10 goals established by the work group of 37 experts from across the wind, solar, conservation, local planning, and local government sectors. These goals provide a framework which the County can use to shape its next steps within this growing sector.

⁴ <https://www.cyberseek.org/heatmap.html>

⁵ <https://pv-magazine-usa.com/2019/06/19/new-york-senate-passes-the-biggest-baddest-renewable-energy-mandate-in-the-nation/>

⁶ <http://www.albanycounty.com/Government/TeamGreen.aspx>

⁷ <https://www.nature.org/content/dam/tnc/nature/en/documents/accelerating-large-scale-wind-and-solar-energy-in-new-york.pdf>

Albany County is well positioned for wind energy above all other forms of clean and green energy. Industry data at the county level (NAICS 221115 Wind Electric Power Generation) indicates this small industry to continue growing – from 60 jobs in 2018 to 155 jobs in 2028 with an average earnings per job of \$127,000. A supporting clean and green energy industry, NAICS 221122 Electric Power Generation, will show slight growth from 2018 to 2028, from 423 to 432 jobs (a 2% increase). Among all the clean and green energy industries – producing or helping in the transmission of power, a narrow representation of the industry cluster – these are the only two with significant job data.⁸

In addition, workforce opportunities abound. The below outlines several located within Albany County:

- ◆ **Climate Jobs NY** is a coalition of labor unions addressing jobs that are both equitable for workers and helpful to creating a healthy planet. Their June 2017 report, *Reversing Inequality, Combatting Climate Change: A Climate Jobs Program for New York State*, identifies action in the energy, building, and transportation sectors.⁹
- ◆ The **Clean Climate Careers** initiative is a state partnership with Climate Jobs NY and Cornell University which will invest up to \$1.5B in major renewable energy projects. Its aim is to 1) invest in Clean Tech and supercharge Renewable Energy Development; 2) create clean climate careers; and, 3) advance environmental justice.¹⁰
- ◆ **NYSERDA's Clean Energy Workforce Development** initiative has funding to support workforce development and training in a number of ways including through 1) Energy Efficiency and Clean Technology Training; 2) On-the-job Training; 3) Internships; and 4) Building Operations & Maintenance.¹¹
- ◆ For profit companies are also providing needed training to other for profit companies, such as **Stonehenge Associates** headquartered in Watervliet. They offer Building Performance Institute (BPI) Certification and continuing education; renewable energy training; customized training solutions; and concierge training.¹²

⁸ Data from EMSI Complete Employment 2019.1. Note that other reports, such as *The 2019 US Energy & Employment Report* authored by the National Association of State Energy Officials and the Energy Futures Initiative have a more robust methodology for pulling clean and green jobs from other sectors, and estimating what percent of employees spend at least some of their time on renewable projects. From their FAQ on what counts as a “clean job”: *Employment in solar energy, wind energy, energy efficiency, combined heat and power, bioenergy, non-woody biomass, low-impact hydro power, geothermal, clean vehicle technologies, clean energy storage, smart grid, micro grid, grid modernization, and advanced biofuels. Other industries commonly associated with clean energy — such as corn ethanol, woody biomass, large hydropower, and nuclear — are not included in these jobs numbers. These include jobs involved in construction, manufacturing, wholesale trade, transmission and distribution, and professional services. Jobs in retail trade, repair services, water or waste management, and indirect employment or induced employment are not included.* The report can be accessed here: <https://www.usenergyjobs.org/>.

⁹ <https://www.ilr.cornell.edu/sites/ilr.cornell.edu/files/InequalityClimateChangeReport.pdf>

¹⁰ <https://www.governor.ny.gov/news/governor-cuomo-announces-major-climate-and-jobs-initiative-partnership-worker-institute-cornell>

¹¹ <https://www.nyserda.ny.gov/All-Programs/Programs/Clean-Energy-Workforce-Development>

¹² <https://www.stonehenge-associates.com/training-education>

Trends in Wind Turbine Manufacturing

The Port of Albany and Port of Coeymans offer a potential opportunity to attract offshore wind power manufacturers and the State of New York has invested significantly in an effort to break into this supply chain. According to a study by BVG Associates, the offshore wind sector could generate up to 500,000 jobs in the next 25 years.¹³

The Wind Turbine Manufacturing industry overall (including on- and offshore) is expected to decline overall over the five years to 2023, due to the scheduled expiration of the federal renewable electricity production tax credit (PTC), which was last extended in 2015. New federal policies encouraging the development of renewal energy are appearing extremely unlikely. The following summary of trends in the Wind Power Industry is from IBISWorld.

Overseas and offshore

Wind power producers have been pushing for the establishment of offshore wind projects, which capitalize on the more reliable high winds off the coasts of the United States. The development of offshore projects may provide turbine manufacturers with a new outlet to generate revenue. According to the US Department of Energy, offshore wind could account for a quarter of wind power generation by 2030. Offshore wind farm developments could provide a much-needed growth market for industry operators over the next five years. However, industry operators will encounter strong competition from abroad for offshore wind projects. Many manufacturers in Europe have more experience with offshore wind turbines and more-specialized technology due to the continent's earlier adoption of wind power. In addition, components for offshore projects are easier to ship internationally because they do not have to be transported inland.

*The potential for new import competition in the offshore market aside, imports are expected to fall over the next five years as demand for new wind turbines drops. The value of imported wind turbines is forecast to decrease at an annualized rate of 17.8% to \$748.8 million over the five years to 2023. This is anticipated to be caused only by a precipitous drop in domestic demand; imports are expected to maintain a relatively consistent share of the domestic market and will likely fluctuate significantly during the period. Exports, on the other hand, are expected to provide a much-needed source of revenue for the industry as domestic demand tapers off. Based on data from the Global Wind Energy Council, new non-US wind energy capacity is projected to increase an annualized 9.7% over the next five years. **As a result, IBISWorld projects that export revenue will rise at an annualized rate of 6.4% to \$390.2 million, mitigating the industry's decline amid faltering domestic demand.***

Uncertain future

Revenue is anticipated to fall sharply following the expiration of the PTC at the end of 2019. However, in the longer term, wind power is expected to become increasingly viable without public incentives. Distribution systems have had to be upgraded to handle new wind turbines and, now that these upfront investments

¹³ <https://www.politico.com/states/new-york/albany/story/2019/03/19/hungry-for-a-new-offshore-wind-industry-states-pour-millions-into-ports-919051>

have already been made in many regional markets, the cost of installing wind power will likely continue to decline.

Workforce

The assembly process involves repetitive actions that can be automated to increase production speed and cost efficiency, but **workers are needed to fine tune and perform quality control throughout the assembly line**. In 2018, for every dollar spent on wages, industry companies are expected to invest \$0.11 on capital. Although production line workers command modest wages, the industry is also dependent on a large number of highly skilled machinists, engineers and production managers.

The positive repercussions from identifying actions within the clean and green energy sector can have profound effects on Albany County's economy. The visibility of this field can potentially carry over to other projects and round out a diverse set of industry priorities. In addition, because there is so much momentum at the state level (both through reporting, energy goals, and workforce initiatives) initiatives within this sector show promise for additional funding and collaboration.

TOP OCCUPATIONS

The figure below highlights the top 25 occupations in Albany County. These represent occupations within all industry sectors at county businesses. Top occupations by number of jobs include Retail Sales Workers, Business Operations Specialists, Health Diagnosing and Treating Practitioners, Information and Record Clerks, and Other Office and Administrative Support Workers. Across comparison geographies top occupations are similar. Occupations for which Albany County showed highest concentrations include Post Secondary Teachers; Councilors, Social Workers, and other Community and Social Service Specialists; and Secretaries and Administrative Assistants.

Figure 31: Top 25 Occupations by Employment, 3-Digit SOC – Albany County

Top 25 Occupations by Employment, 3-Digit SOC - Albany County							
SOC	Description	2008 Jobs	2018 Jobs	2008 - 2018 Change	2008 - 2018 % Change	2018 Location Quotient	Avg. Hourly Earnings
41-2000	Retail Sales Workers	12,891	12,779	(112)	(1%)	0.96	\$ 12.76
13-1000	Business Operations Specialists	9,841	11,013	1,172	12%	1.35	\$ 35.37
29-1000	Health Diagnosing and Treating Practitioners	8,684	10,979	2,295	26%	1.29	\$ 45.43
43-4000	Information and Record Clerks	10,763	10,969	206	2%	1.21	\$ 18.17
43-9000	Other Office and Administrative Support Workers	12,544	9,633	(2,911)	(23%)	1.42	\$ 17.83
35-3000	Food and Beverage Serving Workers	8,364	9,513	1,149	14%	0.82	\$ 12.12
15-1100	Computer Occupations	7,752	9,417	1,665	21%	1.39	\$ 38.13
43-6000	Secretaries and Administrative Assistants	10,193	9,039	(1,154)	(11%)	1.47	\$ 23.31
37-2000	Building Cleaning and Pest Control Workers	6,716	7,195	479	7%	1.14	\$ 13.31
13-2000	Financial Specialists	6,579	6,363	(216)	(3%)	1.40	\$ 35.87
47-2000	Construction Trades Workers	6,276	6,058	(218)	(3%)	0.69	\$ 25.64
21-1000	Counselors, Social Workers, and Other Community and Social Service Specialists	6,073	5,975	(98)	(2%)	1.80	\$ 25.55
53-3000	Motor Vehicle Operators	5,697	5,873	176	3%	0.85	\$ 18.09
39-9000	Other Personal Care and Service Workers	4,286	5,718	1,432	33%	0.84	\$ 13.61
43-3000	Financial Clerks	6,819	5,320	(1,499)	(22%)	1.07	\$ 19.96
53-7000	Material Moving Workers	5,028	5,320	292	6%	0.70	\$ 15.78
43-5000	Material Recording, Scheduling, Dispatching, and Distributing Workers	5,374	5,118	(256)	(5%)	0.79	\$ 18.17
29-2000	Health Technologists and Technicians	4,673	5,039	366	8%	1.04	\$ 22.73
31-1000	Nursing, Psychiatric, and Home Health Aides	5,525	4,943	(582)	(11%)	1.30	\$ 13.01
25-2000	Preschool, Primary, Secondary, and Special Education School Teachers	5,336	4,633	(703)	(13%)	0.71	\$ 32.52
11-9000	Other Management Occupations	4,093	4,533	440	11%	0.80	\$ 45.54
11-1000	Top Executives	4,054	4,512	458	11%	1.13	\$ 60.93
49-9000	Other Installation, Maintenance, and Repair Occupations	4,223	4,347	124	3%	0.88	\$ 24.73
25-1000	Postsecondary Teachers	3,166	4,092	926	29%	1.79	\$ 45.49
41-3000	Sales Representatives, Services	2,950	3,941	991	34%	1.00	\$ 36.84

Source: EMSI Complete Employment 2019.1

Figure 32: Top 25 Occupations by Employment, 3-Digit SOC - Capital Region

Top 25 Occupations by Employment, 3-Digit SOC - Capital Region							
SOC	Description	2008 Jobs	2018 Jobs	2008 - 2018 Change	2008 - 2018 % Change	2018 Location Quotient	Avg. Hourly Earnings
41-2000	Retail Sales Workers	33,171	31,893	(1,278)	(4%)	1.03	\$ 12.71
35-3000	Food and Beverage Serving Workers	21,920	26,346	4,426	20%	0.98	\$ 12.25
29-1000	Health Diagnosing and Treating Practitioners	18,679	22,590	3,911	21%	1.15	\$ 44.91
43-4000	Information and Record Clerks	22,063	22,116	53	0%	1.06	\$ 17.38
13-1000	Business Operations Specialists	16,782	19,039	2,257	13%	1.01	\$ 33.73
47-2000	Construction Trades Workers	20,065	18,292	(1,773)	(9%)	0.90	\$ 23.00
43-9000	Other Office and Administrative Support Workers	22,467	18,094	(4,373)	(19%)	1.15	\$ 17.16
43-6000	Secretaries and Administrative Assistants	19,424	17,482	(1,942)	(10%)	1.23	\$ 21.70
15-1100	Computer Occupations	14,488	16,598	2,110	15%	1.05	\$ 36.92
39-9000	Other Personal Care and Service Workers	11,177	15,644	4,467	40%	0.99	\$ 13.55
37-2000	Building Cleaning and Pest Control Workers	15,045	15,594	549	4%	1.06	\$ 13.23
25-2000	Preschool, Primary, Secondary, and Special Education School Teachers	17,772	15,572	(2,200)	(12%)	1.04	\$ 30.95
53-3000	Motor Vehicle Operators	14,222	14,562	340	2%	0.91	\$ 18.36
43-5000	Material Recording, Scheduling, Dispatching, and Distributing Workers	12,731	12,650	(81)	(1%)	0.85	\$ 17.51
53-7000	Material Moving Workers	12,604	12,443	(161)	(1%)	0.71	\$ 15.86
31-1000	Nursing, Psychiatric, and Home Health Aides	13,853	12,265	(1,588)	(11%)	1.39	\$ 13.60
29-2000	Health Technologists and Technicians	11,033	12,218	1,185	11%	1.09	\$ 22.51
43-3000	Financial Clerks	14,762	11,751	(3,011)	(20%)	1.02	\$ 19.08
11-9000	Other Management Occupations	11,181	11,476	295	3%	0.88	\$ 39.38
21-1000	Counselors, Social Workers, and Other Community and Social Service Specialists	11,274	11,413	139	1%	1.49	\$ 24.85
49-9000	Other Installation, Maintenance, and Repair Occupations	10,604	11,246	642	6%	0.98	\$ 23.63
13-2000	Financial Specialists	11,220	11,116	(104)	(1%)	1.05	\$ 36.19
11-1000	Top Executives	9,125	10,162	1,037	11%	1.10	\$ 57.33
35-2000	Cooks and Food Preparation Workers	8,583	9,250	667	8%	0.79	\$ 12.98
25-9000	Other Education, Training, and Library Occupations	9,342	9,211	(131)	(1%)	1.59	\$ 16.18

Source: EMSI Complete Employment 2019.1

Figure 33: Top 25 Occupations by Employment, 3-Digit SOC - NYS

Top 25 Occupations by Employment, 3-Digit SOC - NYS							
SOC	Description	2008 Jobs	2018 Jobs	2008 - 2018 Change	2008 - 2018 % Change	2018 Location Quotient	Avg. Hourly Earnings
41-2000	Retail Sales Workers	533,326	547,989	14,663	3%	0.98	\$ 12.89
35-3000	Food and Beverage Serving Workers	327,869	434,860	106,991	33%	0.90	\$ 13.25
29-1000	Health Diagnosing and Treating Practitioners	324,581	391,246	66,665	21%	1.10	\$ 52.10
43-4000	Information and Record Clerks	376,882	374,581	(2,301)	(1%)	0.99	\$ 18.74
39-9000	Other Personal Care and Service Workers	233,918	358,917	124,999	53%	1.26	\$ 13.53
13-1000	Business Operations Specialists	251,863	327,547	75,684	30%	0.96	\$ 38.25
43-6000	Secretaries and Administrative Assistants	371,116	322,919	(48,197)	(13%)	1.26	\$ 23.65
47-2000	Construction Trades Workers	325,403	321,790	(3,613)	(1%)	0.88	\$ 28.11
31-1000	Nursing, Psychiatric, and Home Health Aides	278,205	314,621	36,416	13%	1.98	\$ 13.68
37-2000	Building Cleaning and Pest Control Workers	292,559	306,314	13,755	5%	1.16	\$ 15.54
43-9000	Other Office and Administrative Support Workers	327,358	292,649	(34,709)	(11%)	1.03	\$ 17.34
25-2000	Preschool, Primary, Secondary, and Special Education School Teachers	309,949	292,495	(17,454)	(6%)	1.08	\$ 36.29
15-1100	Computer Occupations	214,825	269,988	55,163	26%	0.95	\$ 44.74
53-3000	Motor Vehicle Operators	246,857	268,429	21,572	9%	0.93	\$ 19.00
13-2000	Financial Specialists	244,345	267,628	23,283	10%	1.40	\$ 52.88
43-5000	Material Recording, Scheduling, Dispatching, and Distributing Workers	251,458	249,780	(1,678)	(1%)	0.93	\$ 18.01
41-3000	Sales Representatives, Services	170,542	214,558	44,016	26%	1.30	\$ 49.13
43-3000	Financial Clerks	259,508	212,752	(46,756)	(18%)	1.02	\$ 20.43
53-7000	Material Moving Workers	200,900	207,549	6,649	3%	0.65	\$ 16.49
49-9000	Other Installation, Maintenance, and Repair Occupations	182,530	196,164	13,634	7%	0.95	\$ 23.92
11-9000	Other Management Occupations	171,197	188,951	17,754	10%	0.80	\$ 45.40
11-1000	Top Executives	152,109	187,189	35,080	23%	1.12	\$ 73.35
35-2000	Cooks and Food Preparation Workers	148,076	178,259	30,183	20%	0.84	\$ 13.26
21-1000	Counselors, Social Workers, and Other Community and Social Service Specialists	164,009	176,825	12,816	8%	1.28	\$ 25.27
29-2000	Health Technologists and Technicians	159,557	174,820	15,263	10%	0.86	\$ 25.32

Source: EMSI Complete Employment 2019.1

EMPLOYMENT CONCENTRATION

Location Quotients for all Albany County for general occupation categories demonstrate where the county has competitive advantages relative to other similarly sized geographies, based on national trends. Albany County has notable concentrations in Legal; Life, Physical, and Social Science; Community and Social Service; Business and Financial Operations; and Computer and Mathematical occupations.

Figure 34: Concentration of Employment, 2018 - Albany County

Concentration of Employment, 2018 - Albany County		
SOC	Description	LQ
23-0000	Legal Occupations	2.32
19-0000	Life, Physical, and Social Science Occupations	1.88
21-0000	Community and Social Service Occupations	1.58
13-0000	Business and Financial Operations Occupations	1.37
15-0000	Computer and Mathematical Occupations	1.35
29-0000	Healthcare Practitioners and Technical Occupations	1.18
43-0000	Office and Administrative Support Occupations	1.17
17-0000	Architecture and Engineering Occupations	1.13
37-0000	Building and Grounds Cleaning and Maintenance Occupations	1.13
33-0000	Protective Service Occupations	1.10
31-0000	Healthcare Support Occupations	1.06
25-0000	Education, Training, and Library Occupations	1.05
11-0000	Management Occupations	1.01
49-0000	Installation, Maintenance, and Repair Occupations	0.91
39-0000	Personal Care and Service Occupations	0.89
41-0000	Sales and Related Occupations	0.89
27-0000	Arts, Design, Entertainment, Sports, and Media Occupations	0.87
47-0000	Construction and Extraction Occupations	0.84
53-0000	Transportation and Material Moving Occupations	0.76
35-0000	Food Preparation and Serving Related Occupations	0.74
51-0000	Production Occupations	0.51
55-0000	Military-only occupations	0.22
45-0000	Farming, Fishing, and Forestry Occupations	0.18
99-0000	Unclassified Occupation	0.00

Source: EMSI Complete Employment 2019.1

ESTABLISHMENTS & JOB GROWTH BY STAGE

Looking at the distribution of businesses by size in Albany County, between 2012 and 2017, the number of establishments increased by 2,905 or 15.9%, compared to 15.8% in the MSA (Albany-Schenectady-Troy) and 15.1% nationally.

Stage 1 firms—firms with between 2 and 9 employees—constituted the largest proportion of growth in the county, growing by 2,110 businesses and accounting for 17.5% of the overall increase in the number of establishments. This trend was mirrored at the MSA and national level, with 19.8% and 19.1% growth in establishments respectively.

Stage 2 firms—firms with between 10 and 99 employees—grew by 13.7% in the county compared to 7.8% in the MSA and 6.3% nationally. Stage 2 businesses are typically those that have survived the 50% failure rate of the startup phase and are entering a high-growth stage.

Figure 35: Establishments by Stage

Establishments by Stage, Albany County					
Establishment Stage (No. of Employees)	2012	2017	2017 % of Total	2012-2017 Change	2012-2017 Pct. Change
Self Employed (1)	2,158	2,461	11.6%	303	14.0%
Stage 1 (2-9)	12,035	14,145	66.8%	2,110	17.5%
Stage 2 (10-99)	3,692	4,199	19.8%	507	13.7%
Stage 3 (100-499)	339	335	1.6%	(4)	-1.2%
Stage 4 (500+)	60	49	0.2%	(11)	-18.3%
ALL	18,284	21,189	100.0%	2,905	15.9%

Source: YourEconomy.org

Establishments by Stage, Albany-Schenectady-Troy					
Establishment Stage (No. of Employees)	2012	2017	2017 % of Total	2012-2017 Change	2012-2017 Pct. Change
Self Employed (1)	5,521	6,092	2.1%	571	10.3%
Stage 1 (2-9)	25,992	31,147	10.7%	5,155	19.8%
Stage 2 (10-99)	7,625	8,219	2.8%	594	7.8%
Stage 3 (100-499)	659	653	0.2%	(6)	-0.9%
Stage 4 (500+)	103	84	0.0%	(19)	-18.4%
ALL	39,900	46,195	100.0%	6,295	15.8%

Source: YourEconomy.org

Establishments by Stage, United States					
Establishment Stage (No. of Employees)	2012	2017	2017 % of Total	2012-2017 Change	2012-2017 Pct. Change
Self Employed (1)	1,831,643	1,973,810	12.5%	142,167	7.8%
Stage 1 (2-9)	9,338,417	11,125,061	70.2%	1,786,644	19.1%
Stage 2 (10-99)	2,384,413	2,535,326	16.0%	150,913	6.3%
Stage 3 (100-499)	188,346	184,108	1.2%	(4,238)	-2.3%
Stage 4 (500+)	21,753	19,636	0.1%	(2,117)	-9.7%
ALL	13,764,572	15,837,941	100.0%	2,073,369	15.1%

Source: YourEconomy.org

Between 2012 and 2017, Stage 1 firms in Albany County contributed the largest job growth with 8,778 jobs for a 19.3% change. Stage 2-sized businesses added 6,628 jobs for a 7.2% change. Stage 3 and Stage 4 firms in the county both shed jobs leading to an overall decline in establishments from 2012 to 2017. Similar trends were exhibited at the MSA and national levels.

Figure 36: Jobs by Stage of Establishment

Jobs by Stage of Establishment, Albany County					
Establishment Stage (No. of Employees)	2012	2017	2017 % of Total	2012-2017 Change	2012-2017 Pct. Change
Self Employed (1)	2,158	2,461	0.8%	303	14.0%
Stage 1 (2-9)	45,589	54,367	18.8%	8,778	19.3%
Stage 2 (10-99)	92,254	98,882	34.1%	6,628	7.2%
Stage 3 (100-499)	64,289	63,074	21.8%	(1,215)	-1.9%
Stage 4 (500+)	88,909	71,048	24.5%	(17,861)	-20.1%
ALL	293,199	289,832	100.0%	(3,367)	-1.1%

Source: YourEconomy.org

Jobs by Stage of Establishment, Albany-Schenectady-Troy					
Establishment Stage (No. of Employees)	2012	2017	2017 % of Total	2012-2017 Change	2012-2017 Pct. Change
Self Employed (1)	5,521	6,092	2.1%	571	10.3%
Stage 1 (2-9)	98,478	118,576	40.9%	20,098	20.4%
Stage 2 (10-99)	187,217	197,384	68.1%	10,167	5.4%
Stage 3 (100-499)	121,492	119,199	41.1%	(2,293)	-1.9%
Stage 4 (500+)	163,769	134,575	46.4%	(29,194)	-17.8%
ALL	576,477	575,826	100.0%	(651)	-0.1%

Source: YourEconomy.org

Jobs by Stage of Establishment, United States					
Establishment Stage (No. of Employees)	2012	2017	2017 % of Total	2012-2017 Change	2012-2017 Pct. Change
Self Employed (1)	1,831,643	1,973,810	1.2%	142,167	7.8%
Stage 1 (2-9)	34,753,496	42,318,214	26.2%	7,564,718	21.8%
Stage 2 (10-99)	58,084,231	60,057,845	37.1%	1,973,614	3.4%
Stage 3 (100-499)	32,438,600	31,246,590	19.3%	(1,192,010)	-3.7%
Stage 4 (500+)	27,721,344	26,105,485	16.1%	(1,615,859)	-5.8%
ALL	154,829,314	161,701,944	100.0%	6,872,630	4.4%

Source: YourEconomy.org

TOP ALBANY COUNTY EMPLOYERS

The following figure outlines the employers with over 1,000 employees in Albany County. Albany Medical Center is listed three times for three locations within the area. Eight of the 28 (just under one third) of companies are in the Health Care and Social Assistance sector (NAICS 62). The same number are in NAICS 92 Public Administration (federal, state, and local government agencies). Three top employers are in the Finance and Insurance sector (NAICS 52).

Figure 37: Albany County Employers with over 1,000 Employees

Albany County Employers with Over 1,000 Employees			
Company Name	Primary NAICS	NAICS Description	Number of Employees
Albany Medical Ctr	999990	Unclassified Establishments	5000 to 9999
Albany Medical Emergency Mdcn	622110	General Medical & Surgical Hospitals	5000 to 9999
Albany Medical College	621111	Offices Of Physicians (Exc Mental Health Specs)	5000 to 9999
Albany Medical Ctr	622110	General Medical & Surgical Hospitals	5000 to 9999
St Peter's Hospital	622110	General Medical & Surgical Hospitals	5000 to 9999
Nys Ogs	999990	Unclassified Establishments	1000 to 4999
University At Albany	611310	Colleges, Universities & Professional Schools	1000 to 4999
AMRI	541715	Research & Devmnt-Physical Engineering Life Sci	1000 to 4999
Environmental Conservation Ofc	921120	Legislative Bodies	1000 to 4999
New York State Cmmn Retire Fnd	523930	Investment Advice	1000 to 4999
State Assembly Chamber	921120	Legislative Bodies	1000 to 4999
Center For The Disabled	621493	Freestanding Ambulatory Surgical & Emergency Ctrs	1000 to 4999
Albany Medical Ctr	622110	General Medical & Surgical Hospitals	1000 to 4999
Albany Stratton VA Medical Ctr	621111	Offices Of Physicians (Exc Mental Health Specs)	1000 to 4999
Motor Vehicles Dept	926120	Regulation & Administration-Transportation Prgrms	1000 to 4999
New York State Comptroller Ofc	921120	Legislative Bodies	1000 to 4999
New York State Dept Of Health	923120	Administration Of Public Health Programs	1000 to 4999
Ayco Co LP	523930	Investment Advice	1000 to 4999
Office-Modal Safety-Security	921120	Legislative Bodies	1000 to 4999
Transportation Department	921120	Legislative Bodies	1000 to 4999
US Veterans Medical Ctr	622110	General Medical & Surgical Hospitals	1000 to 4999
Capital District Physicians	524210	Insurance Agencies & Brokerages	1000 to 4999
Wadsworth Center-Laboratories	921120	Legislative Bodies	1000 to 4999
Board Of Co-Op Educational Svc	611710	Educational Support Services	1000 to 4999
Paradies Shops	453220	Gift, Novelty & Souvenir Stores	1000 to 4999
Women In Insurance & Fncl Svc	524210	Insurance Agencies & Brokerages	1000 to 4999
Siena Research Institute	813910	Business Associations	1000 to 4999
State University Of New York	611310	Colleges, Universities & Professional Schools	1000 to 4999

Source: Reference USA

ECONOMIC ASSETS

The following information was obtained from the County's website:

ECONOMIC DEVELOPMENT PARTNERS

ALBANY-COLONIE REGIONAL CHAMBER OF COMMERCE (WWW.AC-CHAMBER.ORG)

Loan Programs

In partnership with Albany County the Chamber administers the AI Tech Revolving Loan Fund. Through this fund businesses can secure loans ranging from \$50,000 - \$500,000 at Wall Street prime minus 3% for the term of the loan. The Chamber also administers the First Opportunity Loan Program, which is a micro-loan program. Loans can vary from \$1,000 to \$25,000, and interest rates are at Wall Street prime plus 2% for the term of the loan.

Entrepreneurial Training

The Chamber also offers a 60-hour Entrepreneurial Assistance Program designed to guide entrepreneurs through the rigors of business formation and management. This program features local business experts and is provided with assistance from Empire State Development Corporation.

CAPITAL DISTRICT COMMUNITY LOAN FUND (WWW.CDCLF.ORG)

The Capital District Community Loan Fund (CDCLF) is a non-profit community development financial institution serving the Capital District. The CDCLF can make loans to nonprofit groups up to \$300,000, and can make loans to lower income, minority and women business owners. Interest rates are currently fixed at 8%. By working in partnership with the College of Saint Rose School of Business the CDCLF also offers eight-week business planning sessions. The CDCLF also offers numerous technical assistance workshops and clinics.

NEW YORK STATE BUSINESS DEVELOPMENT CORPORATION (www.nybdc.com)

The New York State Business Development Corporation (NYBDC) operates a number of loan pools, and can help businesses refinance debt, provide funds for working capital, equipment, and building acquisition and construction. Special loans are also available for women and minority businesses, and Empire Zone certified businesses.

EMPIRE STATE DEVELOPMENT CORPORATION (www.nylovesbiz.com)

Empire State Development Corporation (ESD) offers a wide variety of services and programs, including a wide variety of tax and financial incentive programs, assistance for manufacturers, and workforce training assistance. ESD is New York's primary economic development agency.

ALBANY ONE-STOP CENTER & CAPITAL REGION WORKFORCE INVESTMENT BOARD (www.capreg.org)

The Capital Region Workforce Investment Board (WIB) provides a variety of services for both employers seeking to attract, train and retain qualified workers, and for individuals seeking employment. Assistance for employers included funds for training existing and incumbent employees, and access to a job and resume bank.

For more information businesses should call Robert Wildermuth III at (518) 462-7600 x160.

Job seekers can receive assistance with resume writing, interviewing and their employment search. A number of programs are also offered to provide opportunities for individuals to learn about career paths and future employment opportunities.

NEW YORK STATE DEPARTMENT OF LABOR (www.labor.state.ny.us)

The Department of Labor (DOL) offers training services for employers, maintains a large dataset of employment and wage statistics, and provides a comprehensive listing of tax incentives available to employers. The DOL also maintains a large database of resumes for the benefit of both employers and potential employees.

INDUSTRIAL DEVELOPMENT AGENCIES IN ALBANY COUNTY

Albany County IDA

Hon. Gary W. Domalewicz, Chairman
112 State Street Rm 740
Albany, New York 12207
(518) 466-7952
www.albanycounty.com/ida/

Town of Guilderland IDA

Town Hall, Guilderland, NY 12084
(518) 356-4445
www.guilderland.org

City of Albany IDA

21 Lodge Street, Albany, NY 12207
www.albanyny.org/Businesses/EconomicDevelopment.aspx

Town of Bethlehem IDA

445 Delaware Avenue, Delmar, NY 12054
(518) 439-4955x117
www.bethlememida.com

City of Cohoes IDA

City Hall, Cohoes, NY 12047
(518) 783-2741
www.cohoes.com

Town of Colonie IDA

347 Old Niskayuna Road, Latham, NY 12110
(518) 783-2741
www.colonie.org

Village of Green Island IDA

John J. McNulty, Chairman
Green Island, NY 12183
(518) 273-2201

WORKFORCE DEVELOPMENT RESOURCES

WORKFORCE SERVICE CAREER CENTRAL -

<https://www.albanyny.gov/Government/Departments/YouthandWorkforceServices/WorkforceServiceCareerCentral.aspx>

CAPITAL REGION WORKFORCE INVESTMENT BOARD

<http://www.capreg.org/>

REAL ESTATE TRENDS

The real estate trends below are based on an assessment of CoStar and CBRE data that provide information on the existing supply and demand of space in the Albany-Schenectady-Troy Metropolitan Statistical Area (MSA) with focus on Albany County where applicable.

OFFICE MARKET

The office market in the Albany-Schenectady-Troy MSA has steadily increased from 2007 with approximately 63.0 million square feet to 65.3 million square feet of space in 2017. As of 2017, there were over 2.9 million square feet of available office space for a vacancy rate of 4.5%. This low vacancy rate is met with limited construction creating pent up demand for office space. Rental rates in the office market have fluctuated slightly over the ten-year period from 2007 to 2017 with average gross rental rates are \$15.67 per square foot. During this same time period, industries associated with office space such as Professional, Scientific, and Technical Services; Real Estate and Rental Leasing; Finance and Insurance; and Management of Companies grew by a minimum of 5%. Growth in these industries has contributed to the low vacancy rate by increasing office space absorption.

Recent office market developments in Albany County include the Albany Medical Center EmUrgent Care Facility and office opening in May on Route 9 in Latham (30,000 SF) and the Morgan Stanley office building on Route 7 in Latham (13,300 SF). Additionally, Ayco received final approval to construct their new headquarters at the site of the former Starlite Music Theater in the Town of Colonie. Once constructed, the building will add an additional 150,000 square feet of office space to the market.

RETAIL MARKET

Nationally there has been a decline in traditional retail leading to an emergence of experiential stores, smaller store fronts, and downtown focused retail shops. As ecommerce plays a greater role in retail, embracing technology has become quintessential to capturing the online market presence and remaining competitive in today's marketplace.

The Town of Colonie is the primary driver of retail commerce in Albany County with a significant retail presence along Wolf Road. However, the main commerce center, the Colonie Mall, was hit with store closings losing one of the primary anchors, Sears, in 2017. Much of the former Sears store at Colonie Center has since been redeveloped to house a Whole Foods Market. In the past few years, Colonie Center and the Wolf Road corridor have emerged as mixed-use hub for entertainment, lodging, dining, and professional services.

Changes in the retail dynamic led the Town of Colonie to take action and seek a retail assessment and strategy recommendations from Camoin Associates to ensure the viability of the retail sector.

INDUSTRIAL MARKET

As of 2017, there were 2,461 industrial buildings within the Albany-Schenectady-Troy MSA. Industrial real estate is nearly fully occupied with a very low vacancy rate of 2.6%. Similar to office-space trends, low vacancy rates in combination with a decrease in construction of industrial buildings have led to a pent-up demand for industrial space. Rental rates have declined over the last decade to an average rental rate of \$4.47 per square foot. Triple net rental rates, where the tenant is responsible for operating expenses associated with the property such as real estate taxes, building insurance, and maintenance, are slightly lower at \$4.41 per square foot. CBRE notes the Capital Region's industrial market has experienced an increase in rental rates with older Class B properties achieving rental rates closely associated with Class A properties. This closely tied to rising construction costs, a trend that is anticipated to impact the future industrial market.

Historic growth in the industrial market has been driven by the manufacturing industry which grew by 33% from 2010 to 2017. As growth is projected to continue in the manufacturing realm it will be crucial to adopt advanced processes that utilizes highly skilled workers and technology.

FLEX SPACE MARKET

Flex space is designed to be versatile to encompass a range of uses, which may include research and development, quasi-retail, office space, and industrial and manufacturing uses.¹⁴ Flex space construction has been relatively slow in the Albany-Schenectady-Troy MSA with zero or one delivery per year since 2014. Slow deliveries have helped reduce the vacancy rate from 10.5% in 2014 to its current rate of 4.5%. This reduced vacant space from approximately 970,000 SF to 407,000 SF. Despite the market tightening, rental rates declined during the 2014 to 2017 time period from \$10.50 to \$10.03 per square foot for all rents and \$8.84 to \$8.33 per square foot for triple net space.

¹⁴ CoStar defines a Flex Building as “a type of building(s) designed to be versatile, which may be used in combination with office (corporate headquarters), research and development, quasi-retail sales, and including but not limited to industrial, warehouse, and distribution uses. At least half of the rentable area of the building must be used as office space. Flex buildings typically have ceiling heights under 18', with light industrial zoning.”

CASE STUDY: TALLAHASSEE-LEON COUNTY, FL

Albany County is interested in understanding how well the county is performing in relation to other state capital regions that have a significant government industry. This case study examines how Albany County is performing in comparison to the state capital of Tallahassee, Florida located in Leon County as well as strategic recommendations Tallahassee is implementing to grow its economic base.

DEMOGRAPHIC AND ECONOMIC OVERVIEW

Albany County is larger than Leon County in terms of population and total employment figures. Leon County has experienced stronger population growth, growing by 5.7% from 2010 to 2018 compared to Albany County, which grew 4.4%. Additionally, Leon County outpaced Albany County in employment growth at 3.9% compared to 1.9% during the 2008 to 2018 time period.

Figure 38: Population & Total Employment

Population			
	2010	2018	% Change 2010 - 2018
Albany County	304,204	317,479	4.4%
Leon County	275,487	291,199	5.7%

Source: Esri

Total Employment			
	2008	2018	% Change 2010 - 2018
Albany County	240,792	245,367	1.9%
Leon County	157,318	163,428	3.9%

Source: Esri

The Government sector comprises over a quarter (25.5%) of all jobs within Albany County. This sector comprises an even larger proportion of Leon County's total jobs at 31.7%. Despite these significant shares, Government has lost traction from its 2008 figures in both geographies declining by 7.4% in Albany County and 2.4% in Leon County.

Figure 39: Government Employment

Government Employment					
	2008	2018	% Change 2010 - 2018	% of Total Employment 2008	% of Total Employment 2018
Albany County	67,547	62,515	(7.4%)	28.1%	25.5%
Leon County	53,122	51,839	(2.4%)	33.8%	31.7%

Source: Esri

The figures below display the top five growing industries at the 2-digit NAICS level for Albany County and Leon County. The same five industry sectors led employment growth in the two counties - Health Care and Social Assistance; Educational Services; Administrative and Support and Waste Management and Remediation Services; and Accommodation and Food Services. However, Leon County shows much stronger growth in its top five industries, ranging from growth rates of 17% to 48% compared to 8% to 19% in Albany County.

Figure 40: Top Five Growing Industries Albany County vs. Leon County

Albany County Top Five Growing Industries, 2-Digit				
Description	2008 Jobs	2018 Jobs	2008 - 2018 Change	2008 - 2018 % Change
Health Care and Social Assistance	30,206	34,539	4,333	14.3%
Educational Services	9,153	10,867	1,714	18.7%
Administrative and Support and Waste Management and Remediation Services	11,293	12,677	1,384	12.3%
Accommodation and Food Services	13,548	14,842	1,294	9.6%
Finance and Insurance	12,433	13,439	1,006	8.1%

Source: EMSI Complete Employment 2019.1

Leon County Top Five Growing Industries, 2-Digit				
Description	2008 Jobs	2018 Jobs	2008 - 2018 Change	2008 - 2018 % Change
Health Care and Social Assistance	16,413	20,727	4,314	26.0%
Accommodation and Food Services	13,802	16,772	2,970	22.0%
Administrative and Support and Waste Management and Remediation Services	6,413	7,473	1,060	17.0%
Arts, Entertainment, and Recreation	1,404	2,073	669	48.0%
Educational Services	1,546	2,154	608	39.0%

Source: EMSI Complete Employment 2019.1

STRATEGIC RECOMMENDATIONS AND QUALITY OF LIFE

In 2018, Camoin Associates conducted a Strategic Plan for the Tallahassee-Leon County. The Plan targeted four clusters to maximize resource utilization and enhance opportunities for innovation and long-term vitality, including:

- ◆ Applied Sciences & Innovation
- ◆ Manufacturing & transportation/Logistics
- ◆ Professional Services & Technology
- ◆ Health Care

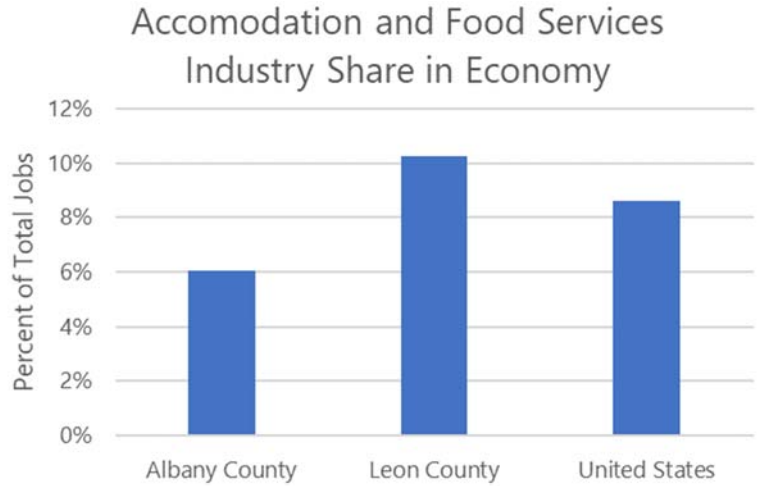
Leon County is noted for having a thriving entrepreneurial community supported by colleges/universities. Recommendations around strengthening that community involved filling gaps in business incubation, mentorships, and access to capital. Leon County is also working to ease communication between the region and businesses to help identify resources for the targeted clusters.

While working on Tallahassee-Leon County’s Strategic Plan, stakeholders interviewed unanimously described Tallahassee-Leon County as a great place to live and to raise a family. Young families have been attracted to the

county for a variety of reasons including small city environment with opportunities to engage in the community, good schools, and proximity to natural beauty and recreation which all contribute to quality of life. Conversely, stakeholders in Albany County noted there was a lack of culture and sense of place.

Most notably contributing to quality of life and sense of place is the hospitality industry, Accommodation and Food Services, which both serves the local residents and workforce as well as visitors. Leon County has a significantly larger portion of its total jobs in the Accommodation and Food Services industry at 10.3% of its total jobs compared to Albany County (6.0%) and the national average (8.6%). An area that is lacking hospitality assets may negatively impact an area’s sense of place and culture, reducing the draw for people to live or work within that community. Opportunities for Albany County to expand its Accommodation and Food Services industry should focus on creating places that serve the residents and daytime workforce population.

Figure 41: Accommodation and Food Services Industry Share in Economy



Source: Esri

ATTACHMENT A: DATA SOURCES

PROPRIETARY DATA SOURCES

ECONOMIC MODELING SPECIALISTS INTERNATIONAL (EMSI)

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

ESRI BUSINESS ANALYST ONLINE (BAO)

ESRI is the leading provider of location-driven market insights. It combines demographic, lifestyle, and spending data with map-based analytics to provide market intelligence for strategic decision-making. ESRI uses proprietary statistical models and data from the U.S. Census Bureau, the U.S. Postal Service, and various other sources to present current conditions and project future trends. Esri data are used by developers to maximize their portfolio, retailers to understand growth opportunities, and by economic developers to attract business that fit their community. For more information, visit www.esri.com

COSTAR

CoStar is the leading source of commercial real estate intelligence in the U.S. It provides a full market inventory of properties and spaces—available as well as fully leased—by market and submarket. Details on vacancy, absorption, lease rates, inventory, and other real estate market data are provided, as well as property-specific information including photos and floor plans. CoStar covers office, retail, industrial, and multifamily markets. CoStar data is researched and verified by the industry's largest professional research team. With 1,200 researchers and 130 field research vehicles, CoStar's team makes calls to property managers; reviews court filings, tax assessor records and deeds; visits construction sites; and scans the web to uncover nearly real-time market changes. More at www.costar.com

IBISWORLD

IBISWorld is one of the world's leading publishers of business intelligence, specializing in industry and procurement research. Through its detailed industry reports available at 5-digit NAICS level, IBISWorld provides insight into market conditions for targeted industries, helps to identify major suppliers or supply chain, and provides an understanding of competitor activity. More at www.ibisworld.com

YOURECONOMY (YE), BUSINESS DYNAMICS RESEARCH CONSORTIUM (BDR)

YourEconomy (YE) aggregates longitudinal establishment-level data by state, metro, and county, enabling the user to track change in a region's establishments, jobs, and sales over time. These variables can be cross-tabulated by business stage (e.g. Self-Employed, Stage One – 2-9 employees, Stage 2 – 10-99 employees, etc.) to show the region's economic makeup by business size and how these businesses have fared economically. It reveals a granular view of business activity in a particular region and shows how communities compare to others. YE uses the Infogroup Historical Database as its underlying data. For more information, visit <http://youreconomy.org/>

PUBLIC DATA SOURCES

AMERICAN COMMUNITY SURVEY (ACS), U.S. CENSUS

The American Community Survey (ACS) is an ongoing statistical survey by the U.S. Census Bureau that gathers demographic and socioeconomic information on age, sex, race, family and relationships, income and benefits, health insurance, education, veteran status, disabilities, commute patterns, and other topics. The survey is mandatory to fill out, but the survey is only sent to a small sample of the population on a rotating basis. The survey is crucial to major planning decisions, like vital services and infrastructure investments, made by municipalities and cities. The questions on the ACS are different than those asked on the decennial census and provide ongoing demographic updates of the nation down to the block group level. For more information on the ACS, visit <http://www.census.gov/programs-surveys/acs/>

ONTHEMAP, U.S. CENSUS

OnTheMap is a tool developed through the U.S. Census Longitudinal Employer-Household Dynamics (LEHD) program that helps to visualize Local Employment Dynamics (LED) data about where workers are employed and where they live. There are also visual mapping capabilities for data on age, earnings, industry distributions, race, ethnicity, educational attainment, and sex. The OnTheMap tool can be found here, along with links to documentation: <http://onthemap.ces.census.gov/>.

ATTACHMENT B: TAPESTRY SEGMENTATION DESCRIPTIONS

Market segmentation is a tool used by retail site selectors and decision makers to understand the consumer characteristics of a trade area. It classifies consumers according to demographic, socioeconomic, housing, and lifestyle characteristics. Retailers and site selectors use market segmentation to compare consumer when considering many site locations. Market segmentation is helpful in the context of this study to identify recreational preferences of Albany County residents.

Market segmentation is based on the concept that people with similar demographic characteristics, purchasing habits, and media preferences naturally gravitate toward each other and into the same neighborhoods. Market segmentation data were obtained from Esri's Tapestry Segmentation model. Additional information about this Esri model can be found here: <http://www.Esri.com/landing-pages/tapestry>.

It is important to recognize that the classifications and labels that Esri uses for defining market segments are generalizations. The descriptions of each segment are based on comparisons with the US as a whole and reflect the propensity of households within that segment to exhibit certain demographic, lifestyle, and consumer characteristics relative to the overall population.

Note that the number in parentheses following each tapestry segment is the percent of households in the County of Albany that fall into that segment.

Segment "In Style" (11.3% or 14,740 households)

Residents embrace an urban lifestyle that includes support of the arts, travel, and extensive reading. They are connected and make full use of the advantages of mobile devices. Professional couples or single households without children, they have the time to focus on their homes and their interests. The population is slightly older and already planning for their retirement.

Socioeconomic Traits:

- ◆ Primarily single-family homes, in older neighborhoods (built before 1980), with a mix of town homes and smaller (5–19 units) apartment buildings.
- ◆ Median home value at \$243,900.
- ◆ Vacant housing units at 8.6%.
- ◆ Median household income of \$73,000 reveals an affluent market with income supplemented by investments (Index 142) and a substantial net worth.
- ◆ Connected and knowledgeable, they carry smartphones and use many of the features.
- ◆ Attentive to price, they use coupons, especially mobile coupons.

Read More >> http://downloads.esri.com/esri_content_doc/dbl/us/tapestry/segment17.pdf

Segment "Emerald City" (9.4% or 12,260 households)

Residents live in lower-density neighborhoods of urban areas throughout the country. Young and mobile, they are more likely to rent. Half have a college degree and a professional occupation. Incomes close to the US median come primarily from wages, investments, and self-employment. This group is highly connected, using the Internet for entertainment and making environmentally friendly purchases. Long hours on the Internet are balanced with time at the gym. Many embrace the “foodie” culture and enjoy cooking adventurous meals using local and organic foods. Music and art are major sources of enjoyment. They travel frequently, both abroad and domestically.

Socioeconomic Traits:

- ◆ Just over half of all homes are renter occupied.
- ◆ Single-person and nonfamily types make up over half of all households.
- ◆ Median home value and average rent are slightly above the US levels; around half of owned homes are worth \$150,000–\$300,000.
- ◆ They buy natural, green, and environmentally friendly products.
- ◆ Very conscious of nutrition, they regularly buy and eat organic foods.
- ◆ Cell phones and text messaging are a huge part of everyday life.
- ◆ They place importance on learning new things to keep life fresh and variable.
- ◆ They are interested in the fine arts and especially enjoy listening to music.

Read More >> http://downloads.esri.com/esri_content_doc/dbl/us/tapestry/segment34.pdf

Segment “Savvy Suburbanites” (7.3% or 9,520 households)

Residents are well educated, well read, and well capitalized. Families include empty nesters and empty nester wannabes, who still have adult children at home. Located in older neighborhoods outside the urban core, their suburban lifestyle includes home remodeling and gardening plus the active pursuit of sports and exercise. They enjoy good food and wine, plus the amenities of the city’s cultural events.

Socioeconomic Traits:

- ◆ 91% owner occupied; 66% mortgaged.
- ◆ Primarily single-family homes, with a median value of \$362,900.
- ◆ Low vacancy rate at 3.8%.
- ◆ Low unemployment at 3.5% (Index 65); higher labor force participation rate at 67.9% (Index 109) with proportionately more 2-worker households at 62.2%.
- ◆ Well-connected consumers that appreciate technology and make liberal use of it for everything from shopping and banking to staying current and communicating.
- ◆ Informed shoppers that do their research prior to purchasing and focus on quality.

Read More >> http://downloads.esri.com/esri_content_doc/dbl/us/tapestry/segment4.pdf

Segment “Parks and Rec” (6.3% or 8,220 households)

These practical suburbanites have achieved the dream of home ownership. They have purchased homes that are within their means. Their homes are older, and town homes and duplexes are not uncommon. Many of these families are two-income married couples approaching retirement age; they are comfortable in their jobs and their homes, budget wisely, but do not plan on retiring anytime soon or moving. Neighborhoods are well established, as are the amenities and programs that supported their now independent children through school and college. The appeal of these kid-friendly neighborhoods is now attracting a new generation of young couples.

Socioeconomic Traits:

- ◆ Homes are primarily owner occupied, single-family residences built prior to 1970; town homes and duplexes are scattered through the neighborhoods.
- ◆ Both median home value and average rent are close to the national level.
- ◆ Households by type mirror the US distribution; married couples, more without children, dominate. Average household size is slightly lower at 2.51, but this market is also a bit older.
- ◆ Older residents draw Social Security and retirement income.
- ◆ The work force is diverse: professionals in health care, retail trade, and education, or skilled workers in manufacturing and construction.
- ◆ This is a financially shrewd market; consumers are careful to research their big-ticket purchases.
- ◆ When planning trips, they search for discounted airline fares and hotels and choose to vacation within the US.
- ◆ These practical residents tend to use their cell phones for calls and texting only.

Read More >> http://downloads.esri.com/esri_content_doc/dbl/us/tapestry/segment18.pdf

Segment “Comfortable Empty Nesters” (6.2% or 8,090 households)

Residents in this large, growing segment are older, with nearly half of all householders aged 55 or older; many still live in the suburbs where they grew up. Most are professionals working in government, health care, or manufacturing. These Baby Boomers are earning a comfortable living and benefitting from years of prudent investing and saving. Their net worth is well above average. Many are enjoying the transition from child rearing to retirement. They value their health and financial well-being.

Socioeconomic Traits:

- ◆ Found throughout the suburbs and small towns of metropolitan areas, where most residents own and live in single-family detached homes.
- ◆ Most homes built between 1950 and 1990.
- ◆ Households generally have one or two vehicles.
- ◆ Most households income from wages or salaries, but a third also draw income from investments (Index 150) and retirement.
- ◆ Comfortable empty nesters residents physically and financially active.
- ◆ Prefer eating at home instead of dining out.
- ◆ Home maintenance a priority among these homeowners

Read More >> http://downloads.esri.com/esri_content_doc/dbl/us/tapestry/segment16.pdf

Segment “Set to Impress” (5.9% or 7,700 households)

Depicted by medium to large multiunit apartments with lower than average rents. These apartments are often nestled into neighborhoods with other businesses or single-family housing. Nearly one in three residents is 20 to 34 years old, and over half of the homes are single person and nonfamily households. Although many residents live alone, they preserve close connections with their family. Income levels are low; many work in food service while they are attending college. This group is always looking for a deal. They are very conscious of their image and seek to bolster their status with the latest fashion. Set to Impress residents are tapped into popular music and the local music scene.

Socioeconomic Traits:

- ◆ Renters make up nearly three quarters of all households.
- ◆ They’re found mostly in urban areas, but also in suburbs.
- ◆ Single-person households make up over 40% of all households.
- ◆ It is easy enough to walk or bike to work for many residents.
- ◆ Unemployment is higher, although many are still enrolled in college.
- ◆ They always have an eye out for a sale and will stock up when the price is right.
- ◆ They prefer name brands, but will buy generic when it is a better deal.
- ◆ Quick meals on the run are a reality of life.
- ◆ They’re image-conscious consumers that dress to impress and often make impulse buys.
- ◆ They maintain close relationships with family.

Read More >> http://downloads.esri.com/esri_content_doc/dbl/us/tapestry/segment54.pdf

Segment “Old and Newcomers” (5.3% or 6,910 households)

This market features singles’ lifestyles, on a budget. The focus is more on convenience than consumerism, economy over acquisition. Old and Newcomers is composed of neighborhoods in transition, populated by renters who are just beginning their careers or retiring. Some are still in college; some are taking adult education classes. They support charity causes and are environmentally conscious. Age is not always obvious from their choices.

Socioeconomic Traits:

- ◆ 55% renter occupied; average rent, \$880.
- ◆ 45% of housing units are single-family dwellings; 45% are multiunit buildings in older neighborhoods, built before 1980.
- ◆ Average vacancy rate at 11%.
- ◆ 32% of households are currently receiving Social Security.
- ◆ 31% have a college degree (Index 99), 33% have some college education, 9% are still enrolled in college.
- ◆ Consumers are price aware and coupon clippers, but open to impulse buys.
- ◆ They are attentive to environmental concerns.

- ◆ They are more comfortable with the latest technology than buying a car.

Read More >> http://downloads.esri.com/esri_content_doc/dbl/us/tapestry/segment38.pdf

ATTACHMENT C: INTERVIEW SUMMARY

As part of the initial research to produce an economic development strategy for the Albany County, NY, Camoin 310 interviewed Albany County stakeholders. These discussions covered Albany County's business climate, its strengths and weaknesses related to business attraction and retention, and the role the County might play in future economic development initiatives. Comments from the stakeholders are summarized below, organized around major themes that emerged:

- General Economic Development & County's Role
- Workforce Development
- Quality of Place & Tourism
- Infrastructure
- Small Business, Innovation & Entrepreneurship

This information was used to inform the subsequent steps of the strategic planning process, including project identification and strategy development.

GENERAL ED & COUNTY'S ROLE

OPPORTUNITIES

- Create a county-wide EDO to organize and lead vision for economic development – needs strength and flexibility (not tied to Legislature or County Executive) – transparency is key
- Launch a business listening session to better engage business community
- Between IDA and CDC, Albany County has about \$4M in resources for economic development County could play a role in technology and innovation
- Engage in creative economy
- Initiative to make Albany County one of the greenest counties in the country
- County-owned property on Broadway
- HOT Tax re-allocation potential
- Engage college students in 'hacking' economic development challenges at the neighborhood scale
- Region not doing business retention and expansion support well, opportunity for engagement

CONSTRAINTS

- Missing a go-to resource for economic development in the county, no umbrella organization or hub – businesses are confused about what is available and who to go to for assistance
- Lacking a cohesive vision for county economic development
- No staff/technical experience for Albany County economic development – many stakeholders noted that they 'play' economic developer to their clients interested in the region by showing them around and promoting the area because there isn't anyone doing this in the County
- Many IDA's in the County that work relatively independently of each other/compete with each other
- Most of the rural towns do not have economic development expertise locally
- High poverty rates in 'river cities' as well as some 'hill towns'
- Burden of being the Capital City, but not getting State attention

- The State spread investment in nanotechnology across up-state instead of focusing investment in Albany. Nano has an image problem
- Role of business is not front-and-center in County's initiatives currently
- County doesn't have relationships with business community, needs more engagement – ribbon cuttings, other business-events
- Perception that County Government is not active outside of the City
- Regulatory environment seen as onerous
- Sick leave proposal will harm businesses and put county at a disadvantage
- Legislature acts too slow to be involved in economic development
- City-County relationship is strained
- County IDA is not being used to its full potential
- More than one-half of property is off the tax rolls, either owned by government, higher education, or not for profit organizations.

WORKFORCE DEVELOPMENT

OPPORTUNITIES

- Create a workforce training program geared toward hospitality – not a 4-year program in the market
- Visitor Journey A2DTM – tourism awareness training is successful
- Manufacturing Week events are successful – could get other industries to do something similar
- Public school districts are doing a good job
- County could play role in better connecting job seekers to employment openings
- Support talent development through diversity and economic inclusion initiatives

CONSTRAINTS

- Biggest overall issue facing businesses in the County, lack of ability to find talent is inhibiting business growth and expansion potential
 - Where am I going to find qualified workers?
 - What is going to keep workers that I do attract, here?
- Albany county is not being represented in regional workforce development initiatives and training
- Middle-skills gap (not unique to this area) – need to engage parents more in shaping career paths – need more communication and marketing around this – also need more mentors for kids – SUNY students?

QUALITY OF PLACE & TOURISM

OPPORTUNITIES

- Albany excels at hosting athletic events - Aurora Games – Freihofer’s Run for Women – NCAA tournament - Become known for center for women’s sports
- Tell the county’s story better, feature people from the area, generate pride in the community, get over the corruption brand
- Convention Center – now in this market – potentially go after
- Downtown parking authority is very forward thinking and innovative
- Recent investments in condos and rentals in higher-density nodes
- Malls are doing a good job re-inventing and adapting to the national turbulence in the retail market
- Visitor marketing – targeted audience are AARP members – Albany’s bread-and-butter for tourism
- Social media presence for marketing downtown is growing
- Empire trail done by 2020 – Multi-use trail from Albany to NYC
- Train station is 9th busiest in the country – mostly business travelers – target this group to say/bring family/vacation here
- Attract travel writers
- Launch major festival
- Focus on retail for downtown Albany
- Proximity to Adirondacks and other regional active recreational assets – brand for health
- Children programming to draw more families and tourists

CONSTRAINTS

- People are not as attracted to the County as some other areas in the Capital Region
- Albany doesn’t have its ‘thing’ (event, brand, etc.) to attract people here – no festival that is city-wide
- Perception that there isn’t anything to do here
- Lacking a strong hotel partnership for conventions
- Downtown businesses close after business hours, aren’t serving local market in the evening or on weekends
- Residents can be negative about Albany, need to find ways to get locals excited and welcoming to visitors – need to communicate better the economic value of tourism dollars
- Sidewalks downtown are in poor shape. People walking have to look down to avoid tripped, which means they aren’t looking into business windows.
- Lack of retail downtown where historically Albany was the place to shop
- Downstate Perspective: “Hinterlands” - Some businesses out of NYC have interest in moving here because of the Capitol connection; however, they can’t convince their staff to move here
- Many huge buildings that are eyesores throughout the region

INFRASTRUCTURE

OPPORTUNITIES

- Port – Connects the county to the world, ability to handle extremely large goods
- Airport – Significant asset

- CDTA – Strong - Adding Bus Rapid Transit between Albany and Schenectady – with future plans for investment - testing electric busses
- Include consideration for transportation infrastructure in design review process
- Adopt TOD principals, infill development, build from core
- Albany is a test site for a Micro-Transit Program
- Waterfront development
- Opportunities for mixed-use development in downtown Albany and community development revitalization in the neighborhoods
- Colonie has a reputation as pro-development, lower taxes, aggressive incentives
- Land bank program in City is well administered and could use low-interest fund to support redevelopment of properties, especially in-fill

CONSTRAINTS

- Overall infrastructure is tired
- Poor inventory of available shovel-ready sites
- Broadband is not available in all of the rural 'hill towns'
- Port – Not telling their story, easily forgotten
- Road network is falling apart
- County IDA not wanting to do community-based development
- Relative to surrounding counties, Albany County is lagging in development, e.g. Schenectady Metroplex, Troy entrepreneurial support system

*Note: As part of this project, Bergmann completed a comprehensive analysis of the County's infrastructure (see Volume 2: Infrastructure and Land Use Analysis). The above comments are from the stakeholder interviews completed by Camoin Associates and are not fully inclusive of Bergmann's findings.

SMALL BUSINESS, INNOVATION & ENTREPRENEURSHIP

OPPORTUNITIES

- Capture knowledge coming out of universities, better connect nodes of intellect
- History of innovation being sought and eventually won here
- Lots of places to go for business planning and finance assistance – lenders are very creative and creating programs to support small business
- Create a fund for small business support?
- Regional innovation hotspot is housed locally – SUNY has deep resources to support – needs partners to connect network
- Albany's differentiating factor in the regional network is its research strengths
- Capitalize on being the Capitol and find a niche in cybersecurity
- Innovate 581 is leading regional partner network, acting as convener
- Many businesses are finding equity from NYC firms, opportunity to strengthen this connection?

CONSTRAINTS

- Not well-connected entrepreneurial network, working on it
- Albany loses to Troy, Schenectady, and Saratoga because of a lack of quality of place in the county, despite Albany having more resources to help startups
- Lack of focus on tech-innovation sector, little tech-innovation culture here
- Access to capital for startups, Mid-market growth equity is hard to find, acceleration stage
- Low supply of experienced professionals willing to step in and lead business operations – struggle with pairing scientists to business professionals (CEO or COO role)
- Lack of affordable space downtown for small businesses to move into

INDIVIDUALS INTERVIEWED

Thank you to the individuals and organizations who donated their time to be interviewed as part of this planning process:

- Bob Blackman, Vice President of Business Development, RealtyUSA
- Jill Delaney, CEO, Discover Albany
- Gary Domalewicz, CRC, Albany County Legislative District 10
- Mark Eagan, CEO, Capital Region Chamber
- Matt Grattan, Director of Community & Economic Development, University at Albany
- Andrew Kennedy, President & CEO, CEG
- Linda MacFarlane, Executive Director, Community Loan Fund
- Maureen McGuinness, President, Bethlehem Chamber
- Brian Murphy, Partner, Couch White, LLP
- Kevin O'Connor, Chair, Albany County Business Advisory Board
- Michele Vennard, Former President & CEO, Discover Albany
- Mike Yevoli, Capital Region Director, Empire State Development

Input is also provided by the Strategic Planning Committee:

- Kevin O'Connor, Principal, Albany Consulting Group
- James Barba, President & CEO, Albany Medical Center
- John Bennett, President & CEO, CDPHP
- Nancy Carey Cassidy, Executive Vice President & COO, Picotte Companies
- Robert Curley, New York President, Berkshire Bank
- Peter Gannon, President & CEO, United Way of the Greater Capital Region
- George Hearst, President & Publisher, Albany Times Union
- Jennifer MacPhee, Market President, Bank of America, Merrill Lynch Wealth
- Ruth Mahoney, Market President, Key Bank
- Thomas Marusak, President, Comfortex
- Norm Massry, CEO, Tri City Realty
- James Morrell, President & CEO Pamal Broadcasting
- John Nigro, CEO, Nigro Companies
- Daniel Nolan, President & CEO, Hugh Johnson Advisors
- Steve Obermeyer, CFO, BBL Construction Companies

- Marc Paquin, President, Cass Hill Development
- Marcus Pryor, President, Peter M. Pryor Associates
- James Reed, President & CEO, St. Peter's Health Partners
- Havidan Rodriguez, President, University at Albany
- Brad Rosenstein Owner, Jack's Oyster House
- Jeff Sperber, Owner, The Warehouse at Huck Finn
- David Swawite, President & COO, Omni Development



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ECONOMIC DEVELOPMENT STRATEGY

ALBANY COUNTY, NY

VOLUME 3: INFRASTRUCTURE AND LAND USE ANALYSIS

2020

PREPARED BY:





*Infrastructure and Land Use Analysis was
prepared by Bergmann Associates*

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01

INFRASTRUCTURE: EXISTING CONDITIONS + OPPORTUNITIES

EXISTING CONDITIONS

TRANSPORTATION

INTRODUCTION

Albany County is located at a crossroads of transportation infrastructure. Major interstates provide fast, reliable access to national and international markets and provide people with convenient access to the northeast region and major metropolitan areas. A robust public transportation network provides affordable and frequent access to destinations throughout the County as well as national and international destinations. And, with access to two major rivers and the Erie Canal, the Ports of Albany and Coeymans serve as important hubs of commerce, distribution, and employment within the county.

Transportation and economic development are closely interrelated; a robust, accessible, and well-maintained transportation system enables the efficient movement of people and goods throughout the county. For instance, economic development can stimulate demand for enhanced transportation capacity by increasing the number of commuters and shipments, and the quality and quantity of available transportation infrastructure may attract new businesses to an area or encourage existing businesses to stay or expand. Developers often consider transportation access when siting projects, since optimal transportation conditions can reduce operating costs and increase productivity. As a result, businesses with transportation access and intermodal connectivity can expand their market size. Likewise, efficient transportation systems enable businesses to reduce the cost and time required for commuting and shipping, thereby enabling expanded output.

This section addresses the following topics:

- Roads + Bridges
- Freight Distribution via Truck, Rail, Ports, + Air
- Public Transit
- Bicycle Infrastructure
- Development Limitations
- Opportunities

ROADS + BRIDGES

Importance to Economic Development

Roadways and bridges are arguably the most integral components of the transportation network, providing convenient access and mobility for residents, businesses, and visitors. Numerous studies have shown a positive correlation between the presence and quality of highway infrastructure and economic development. Roadways enable greater mobility, allowing producers to reach markets faster and to increase the size of their market area. Bridges bring roads where they could not otherwise go, connecting markets and allowing the movement of raw materials and finished goods.

The quality of roadway infrastructure is critical to a well-functioning transportation system. Uneven road surfaces and faulty bridges can create unsafe conditions for drivers, necessitate delays for construction, and impact traffic flows. Years of deferred maintenance have left the nation's infrastructure vulnerable, and deferring maintenance now only makes failures more catastrophic and fixes more expensive later. For instance, it's much more expensive (both in human and fiscal terms) to rebuild a collapsed bridge than to pro-actively buttress it.



Centrally located at a crossroads of transportation infrastructure and the confluence of two major rivers.

Albany County provides a diversity of transportation options for residents, businesses, and visitors. Photo credit: Albany County Stormwater Coalition.

TRANSPORTATION

Major Roads

The major and most heavily utilized roadways in Albany County are Interstate 90 with an average of 65,500 vehicles per day, Interstate 87 with 73,000 vehicles per day, Interstate 787 with 40,000 vehicles per day, and New York State Route 7 with 40,000 vehicles per day.

- I-90 and I-87 are both classified as main interstates, meaning they are controlled-access, have high speed limits, and traverse long, uninterrupted distances.
- I-787 is classified as an auxiliary interstate because it is a spur off I-87 that connects urban population centers – Albany and Troy.
- Route 7 is classified as a principal arterial expressway – the next class down from an interstate – because, although it still maintains high traffic volumes, it has only partially-controlled access and is interrupted by cross streets.

These roadways provide convenient access to major cities both within and outside New York State: I-90 connects to other upstate cities, including Syracuse, Rochester, and Buffalo, to the west and Massachusetts to the east, while I-87 connects south to New York City and north to the Canadian border.

Interstate 90 (I-90)

I-90 enters Albany County from the west in the Town of Guilderland as part of the New York State Thruway. About two miles past the City of Albany line, I-90 splits from the Thruway (the mainline follows I-87 South from this junction to New York City) and parallels the northern boundary of the city as a six-lane, divided, toll-free highway. I-90 connects to the north-south I-787 at a stack interchange before crossing the Hudson River into Rensselaer County on the Patroon Island Bridge. At the southern border of Rensselaer County, I-90 intersects with the Berkshire Connector, a spur off the Thruway mainline that crosses into Massachusetts and becomes the Massachusetts Turnpike, providing direct access to Springfield, Worcester, and Boston.

Interstate 87 (I-87)

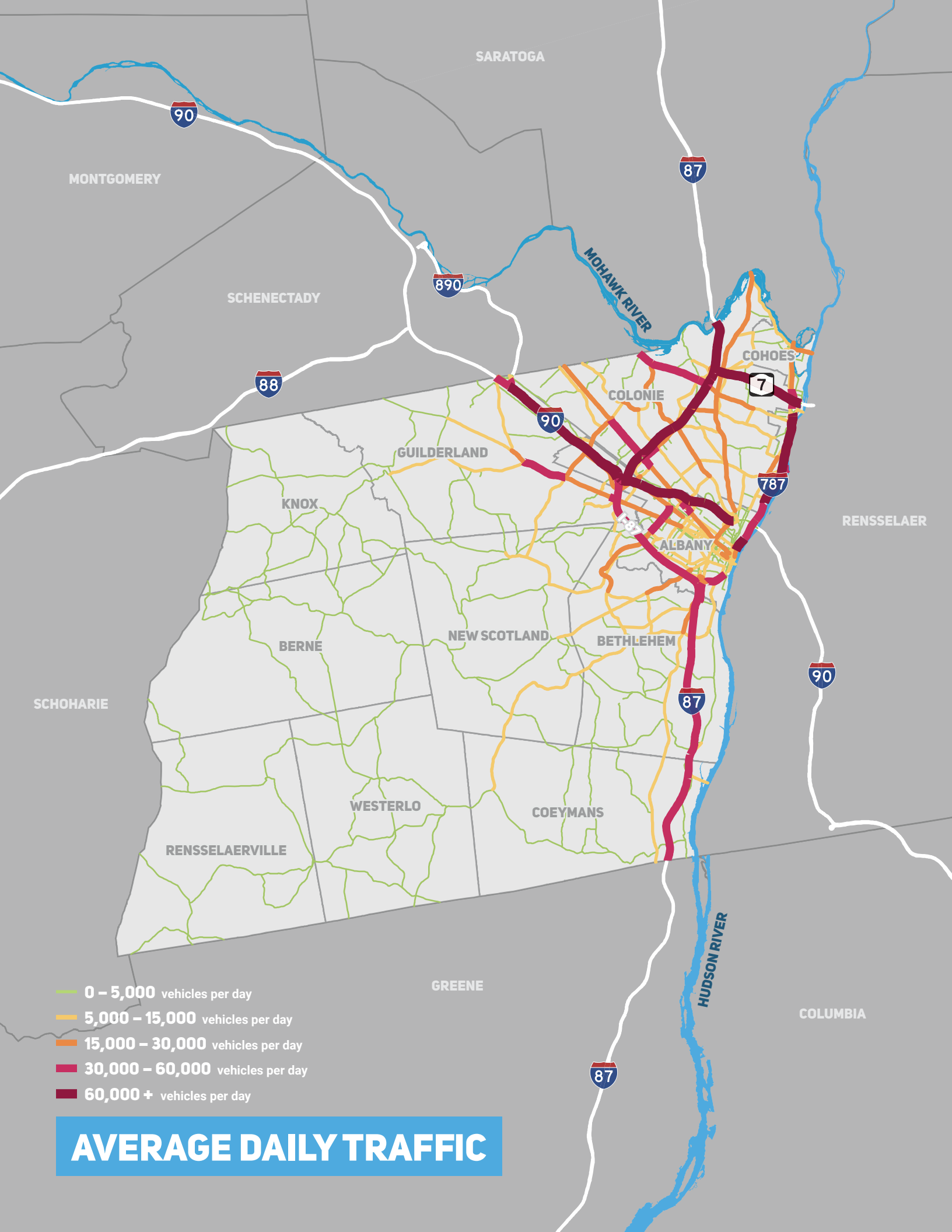
I-87 enters Albany County from the south in the Town of Coeymans as part of the New York State Thruway. It roughly parallels the Hudson River as it travels north before redirecting northwestward to run along the southern border of the City of Albany. It is at this point that I-87 widens from four-lanes to six-lanes. I-87 intersects with I-90 at exit 24 (the busiest exit on the Thruway), breaks from the Thruway (which continues west as part of I-90) and travels north as part of the toll-free Adirondack Northway. I-87 exits Albany County after crossing the Mohawk River on the Twin Bridges in the Town of Colonie. It continues north to the Canadian border at Champlain, just 40 miles south of Montreal.

Interstate 787 (I-787)

I-787 is a 10-mile northward spur of I-87 that connects the toll plaza at exit 23 of the Thruway in Albany to Route 7 in Troy. I-787 connects with US 9 and US 20 at a large interchange southeast of the Empire State Plaza and skirts the east side of downtown Albany along the banks of the Hudson River before connecting to I-90 and eventually Route 7 in Troy. I-787 is the primary route for those traveling into and out of downtown Albany.

New York State Route 7

Route 7 enters Albany County from the east, where it crosses over the Collar City Bridge from Troy in Rensselaer County. It interchanges with I-787 before continuing westward as a controlled-access highway with three lanes in the west direction and two lanes in the east direction. After this 3.5-mile stretch (known as Alternate Route 7), Route 7 briefly joins the Adirondack Northway for a north-south jog before continuing westward as Troy-Schenectady Road. This section of Route 7 is four lanes with a central turning lane. It is heavily commercialized with many cross streets and plaza entrances, unlike the controlled-access portion between the Northway and Troy.



AVERAGE DAILY TRAFFIC

TRANSPORTATION

Condition of Roads + Bridges

Roads

According to the Capital District Transportation Committee (the region's metropolitan planning organization), only half of the Capital District region's roads are in good repair. Approximately 38% of roadways are in fair condition, with intermittent bumps or depressions, and the remaining 11% are in poor condition, with frequent bumps or depressions that make travel uncomfortable.

Roadways in the Capital District and across Albany County are also aging, which compounds pavement condition problems. Most of the roadways in Albany County are between 30 and 50 years old, meaning that many are reaching the end of their engineered lifespan – which generally lasts between 50 and 70 years. Eventually, these older roads will require complete reconstruction, not just resurfacing, to keep them in operating condition.

State- and locally-owned roadway facilities are in the worst condition in the county, with 50% requiring repair or reconstruction according to the CDTC report. Roadways in less-populated, rural areas are also in comparatively worse condition than roadways in more urbanized areas. According to the Albany County Agriculture and Farmland Protection Plan Update (2018), deteriorating rural road conditions and changes to the design of rural roads have negatively affect farmers' ability to move machinery across the county in a safe, efficient manner.

Bridges

Of the roughly 380 bridges in Albany County, 44% are considered to be in fair or deficient condition (assigned a bridge condition rating of less than 5.0, which the NYSDOT uses as a threshold for structurally deficient). These bridges are either seriously or totally deteriorated and are not functioning as originally designed. Most of these structurally deficient bridges are located on interstates or private property (e.g., rail yards or industrial sites).

The county's bridges are also aging, with almost 20% of bridges being 70 years or older, which meets or exceeds the generally accepted 70-year engineered lifespan of a highway bridge. Age is a major factor in the worsening

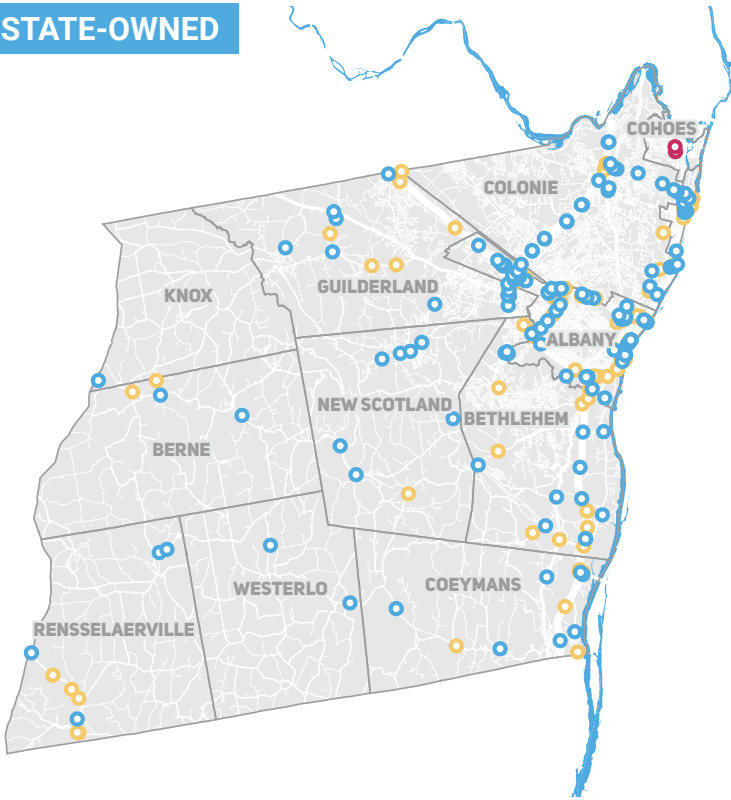
conditions of the Capital District's bridges of late, with structurally deficient interstate bridges jumping from 30% in 2006 to 42% in 2013 and structurally deficient State-owned bridges jumping from 33% to 37% during the same time period.

Congestion

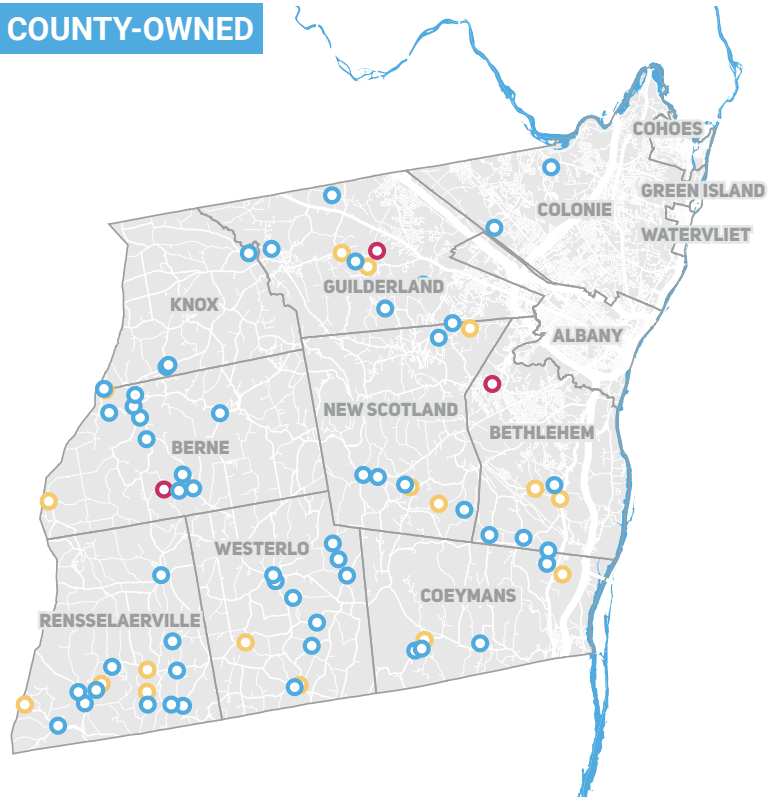
Interstates 87, 90, and 787 and New York State Route 7 experience the worst recurring congestion in the Capital District. Most of this congestion occurs during weekday evening peak hours from 4:00 PM to 6:00 PM. During this period, drivers can expect to spend, on average, 2.12 times as long traveling on Route 7 Westbound between I-787 and I-87 than they would during free flow (regular speed, regular traffic) conditions. Drivers can also expect traveling along the toll-free portion of I-90 Westbound from the River to I-87 to take 1.62 times as long and traveling along I-87 Northbound from I-90 to the Twin Bridges to take 1.74 times as long. During the morning peak period from 7:00 AM to 9:00 AM, congestion on I-87 Southbound is particularly heavy, requiring 1.95 times as long to travel from the Twin Bridges to I-90.

According to the CDTC New Visions 2040 Plan, there is no feasible capital improvement that would eliminate the daily recurring traffic that occurs during these peak periods. Widening highways is prohibitively expensive and studies have shown that adding lanes induces demand – making more people want to drive and thereby leaving the level of congestion unchanged. Widening highways would also not address non-recurring delays – or those that are unpredictable, like a vehicle crash, a snowstorm, or construction. Unlike the recurring congestion described above, non-recurring delay is less tolerable to drivers because they cannot plan for it. The CDTC report indicates that it is actually non-recurring delay, not the daily recurring delay, that causes most (66%) of the congestion in Albany County.

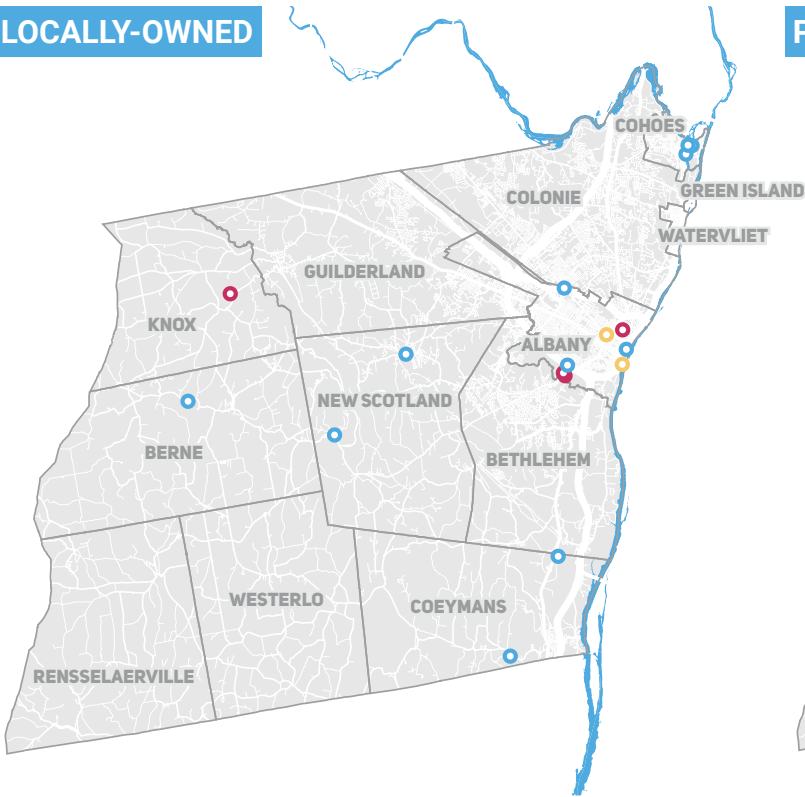
STATE-OWNED



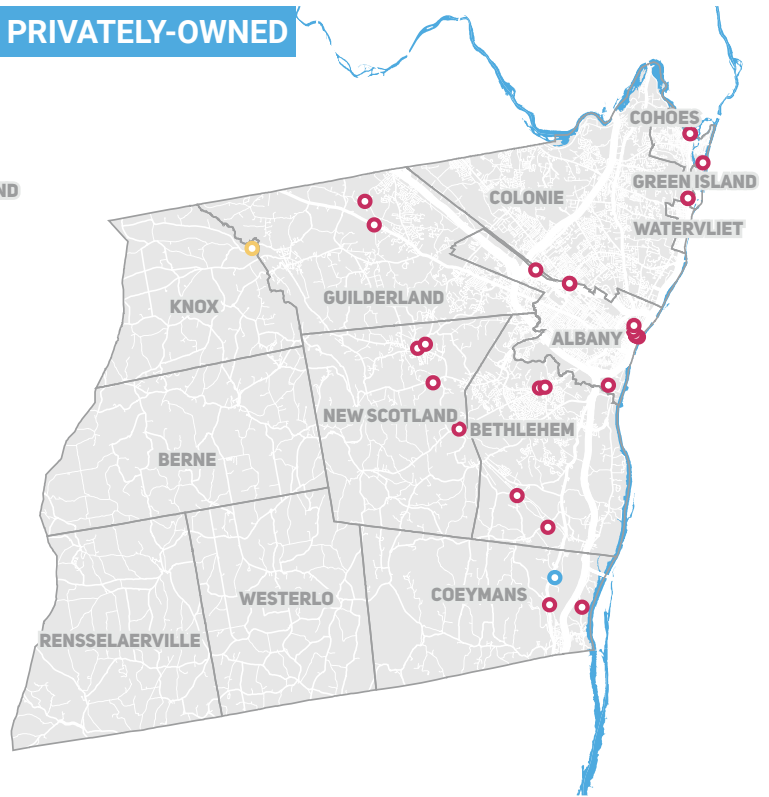
COUNTY-OWNED



LOCALLY-OWNED



PRIVATELY-OWNED



BRIDGE CONDITIONS

- **GOOD CONDITION** (new or good condition)
- **FAIR CONDITION** (minor deterioration)
- **DEFICIENT** (serious to total deterioration)

TRANSPORTATION

Autonomous Vehicles

New York State has permitted the testing of autonomous vehicles on public roads since 2017; without legislative action, this program is scheduled to end in 2020. Autonomous vehicle tests must be approved by the commissioner of the Department of Motor Vehicles, and all tests must be performed under the direct supervision of the New York State Police. Cadillac and Audi tested autonomous vehicles in 2017; however, few other companies have taken advantage of this program. The only self-driving vehicle service in the State is Optimus Ride, which plans to deploy several self-driving shuttles at the Brooklyn Navy Yard in New York City in 2019. These autonomous shuttles will operate on private roads and connect New York City ferry passengers to Flushing Avenue.

Development Limitations

Road and Bridge Conditions

While Albany County's thousands of miles of roadways and hundreds of bridges link the county to other markets and promote economic growth, the county's roadway infrastructure suffers from the same nationwide issues of deferred maintenance and lack of funding. Deteriorating road and bridge infrastructure leads to inefficient movement of goods, decreased mobility, and increased public safety risks - all of which adversely impact the county's potential for economic growth.

Congestion

Although recurring delay is an inconvenience for drivers, this type of congestion is often more indicative of an area's economic vitality, as workers move into and out of the central business district during morning and evening commute periods. It is important, however, to mitigate non-recurring delay in order to keep traffic flows reliable. In particular, approaches to the I-87 Twin Bridges experience significant recurrent congestion during both the morning and evening peak periods, which inconveniences commuters and creates a public safety risk.

Autonomous Vehicles

The lack of legislation permitting the operation of autonomous vehicles on public roads and the fact that self-driving technology is still in development are major obstacles to statewide adoption. Currently, autonomous vehicles require a fairly structured and legible environment; they do not respond well to unusual or unfamiliar situations (e.g., accidents, road work, emergency vehicles) and are not good at interpreting human cues. The adoption of autonomous vehicles is currently in a transition phase and any capital improvements, policies, or legislation related to this technology must carefully consider how driverless cars interact with other human drivers and variable driving environments.



Bridges provide important linkages to the surrounding region. The Thaddeus Kosciuszko Bridge (top), also known as the Twin Bridge, spans the Mohawk River and connects Albany and Saratoga Counties, and the Dunn Memorial Bridge (bottom) spans the Hudson River and connects Albany and Rensselaer Counties. Bridges, however, can also create bottlenecks in the roadway system. For example, the Twin Bridges experience some of the worst traffic congestion in Albany County during morning and evening commutes. Photo credits: Wikipedia (top); marinas.com (bottom).

TRANSPORTATION

Opportunities

Opportunities to pro-actively improve and maintain Albany County's road and bridge infrastructure include:

- Work with farmers and the agricultural industry to establish rural road design standards that are compatible with the movement of farm goods and machinery, such as wider shoulder widths and bridges, shallower drainage ditches, and increased pull-off areas.
- Implement NYSDOT's "preservation first" strategy to prioritize the maintenance of existing road and bridge infrastructure over the construction of new facilities.
- Establish a maintenance schedule that prioritizes critical facilities and frequent, preventative maintenance actions to efficiently use available funds and prevent high-cost, catastrophic failures caused by deferred maintenance.
- Coordinate with the CDTC Bridge Working Group and NYSDOT to identify and prioritize critical infrastructure repairs.
- Conduct an autonomous vehicle feasibility study to draft model local laws/policy and identify highly controlled environments appropriate for driverless technology and capital improvements that improve the condition and quality of the driving environment to benefit all users, not just autonomous vehicles.

To help mitigate congestion issues, as well as reduce greenhouse gas emissions, improve air quality, and increase access to transportation options, the following opportunities exist:

- Enhance incident management systems to improve detection, remove incidents, and restore normal traffic operations as quickly as possible.
- Implement an active traffic management system that uses a combination of real-time traffic data and overhead gantries with electronic displays to convey information to drivers. Active management systems have been shown to reduce crashes and increase travel time reliability and may be particularly effective if installed in frequently congested areas, such as the I-87 approaches to the Twin Bridges.
- Install additional CCTV cameras to improve operations at the Capital Region Transportation Management Center, and install additional on-street message boards to inform drivers of emergency conditions.
- Adhere to CDTC's Transportation Demand Management (TDM) to achieve the following actions:
 - Implement a County transit-oriented development policy to ensure land use and mobility issues are addressed in a comprehensive and integrated manner.
 - Create incentive-based programs that encourage carpooling and the use of public transportation for County employees.
 - Pursue capital projects that increase mobility options, such as biking, walking, and public transit infrastructure.

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TRANSPORTATION

FREIGHT

Importance to Economic Development

Reliable and convenient movement of goods is important to a high-functioning economy. According to the Capital District Transportation Committee's (CDTC) Freight Analysis Framework, the majority of freight movements remain within the Capital District, rather than inbound and outbound movements, which makes the region's freight infrastructure critical to the local and regional economy.

Freight movement and storage is forecast to increase in importance by 2030, with the "Transportation and Warehousing" industry sector projected to grow at the third-largest rate region-wide. In terms of jobs, employment related to specialized freight trucking (+20%) and warehousing & storage (+15%) is expected to increase, while employment related to general freight trucking (-3%), rail transportation (-8%), and air transportation (-31%) is expected to decrease between 2018 and 2028.

Existing Conditions

Freight moves by various modes – truck, rail, water, and air – each with different capacities, reliabilities, and cost-effectiveness for different types of shipments. Some freight trips are by a single mode, while others are multimodal, traveling by ship, rail, and truck – for example – before reaching its final destination. Seamless connectivity between these different modes of transportation is especially important for businesses' supply chains.

Trucking

Trucking, by weight, accounts for the largest share of freight movement in the Capital Region. In 2012, 91 million tons of freight moved by truck to, from, and within the region, and this value is expected to significantly increase through 2040.

Of roads included in the CDTC's Freight Priority Network, or those most often used for truck movements, 76% have pavement ratings from "good" to "excellent" – with little to no visible signs of distress – and only 2% are rated "poor." The majority of bridges (65%) along these roads are also

in good condition. However, 25% are functionally obsolete and 7% are structurally deficient.

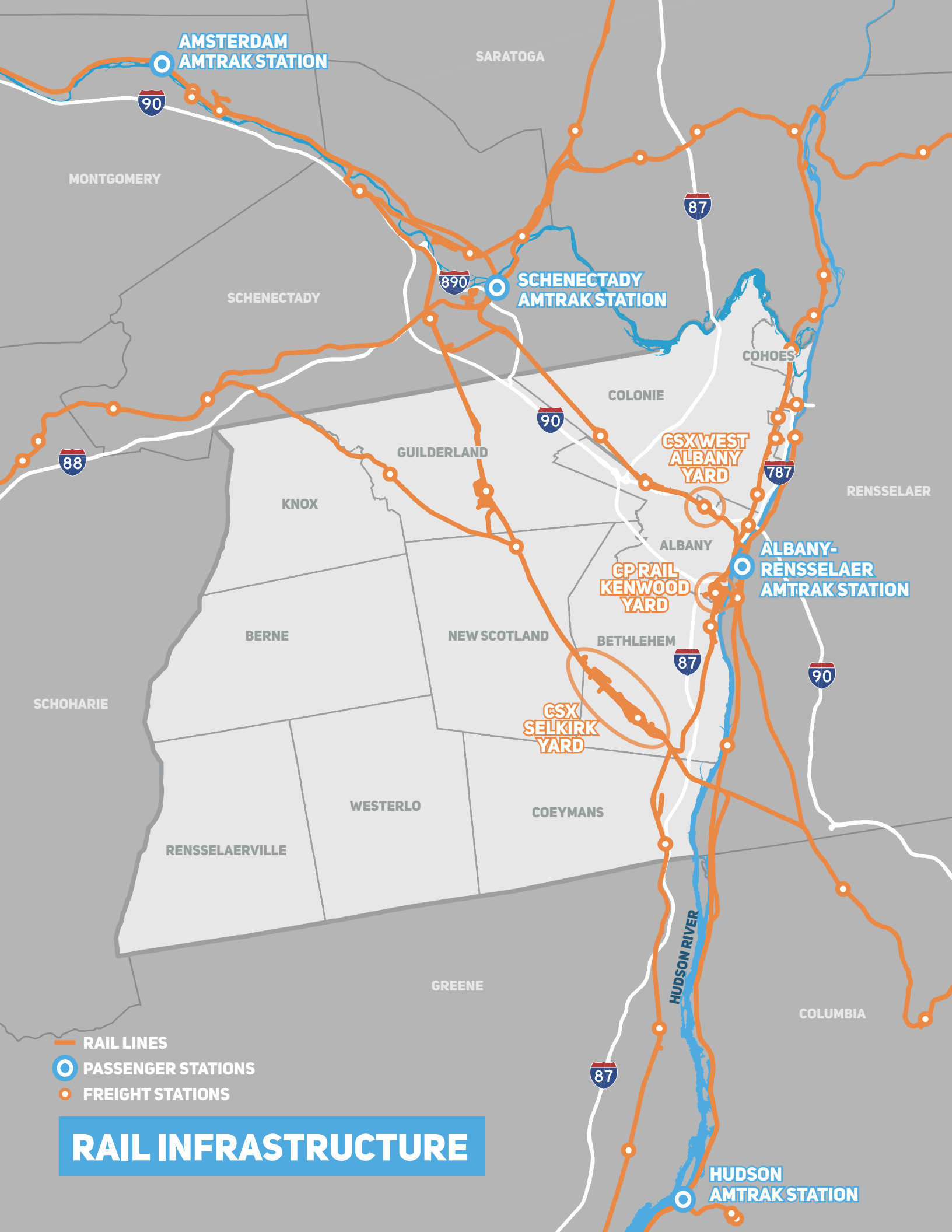
Self-driving trucks are an emerging technology being pursued by several companies, and many experts expect broad adoption of this technology within the next decade. Unlike driverless cars, driverless trucks would spend a majority of their time on highways, where the environment is more structured and predictable compared to a city street. Further, the trucking industry, technology companies, and experts expect driverless technologies will benefit truckers, not displace them. Currently, self-driving truck companies plan to have a driver in the cab at all times, however, that driver would be required to do less manual driving. Some experts envision the development of "truck ports" or transfer hubs adjacent to highways, where human drivers take control to navigate the complexities of the urban environment. The development of these transfer hubs could increase local jobs and enable truckers to stay closer to home.

Rail

Railroads provide an additional transportation option that relieve congestion on highways and also provide opportunities to move goods that cannot be transported via road. Three Class 1 railroads – CSX, Norfolk Southern (NS), and Canadian Pacific (CP) – operate in the Capital Region and connect it to major freight nodes across the country, including: New York and New Jersey, Buffalo, Chicago, Baltimore, Boston, and Atlanta and in Canada at Montreal, Toronto, and Vancouver.

The following rail yards are located in Albany County: the CSX West Albany Yard, the CP Rail Kenwood Yard near the Port of Albany, and the CSX Selkirk Yard, which is the largest of the three. The Selkirk Yard is an intermodal terminal and CSX's major classification yard for the northeast United States. It acts as a gateway to points east of the Hudson River, including New York City.

According to the CDTC's Freight & Goods Movement Study, forecasts for 2040 suggest a significant growth in



**AMSTERDAM
AMTRAK STATION**

SARATOGA

90

MONTGOMERY

SCHENECTADY

890

**SCHENECTADY
AMTRAK STATION**

87

COHOES

COLONIE

**CSX WEST
ALBANY
YARD**

787

RENSSELAER

88

GUILDERLAND

KNOX

ALBANY

**CP RAIL
KENWOOD
YARD**

**ALBANY-
RENSSELAER
AMTRAK STATION**

BERNE

NEW SCOTLAND

BETHLEHEM

87

90

SCHOHARIE

**CSX
SELKIRK
YARD**

WESTERLO

COEYMANS

RENSSELAERVILLE

GREENE

COLUMBIA

HUDSON RIVER

87

**HUDSON
AMTRAK STATION**

- RAIL LINES
- PASSENGER STATIONS
- FREIGHT STATIONS

RAIL INFRASTRUCTURE

TRANSPORTATION

the tonnage transported by rail, but only low to moderate growth in the value of freight transported by rail in the Capital District. This trend will likely result in an overall decrease in the value per ton of freight moved in, out, and through the region.

For a discussion of the passenger rail network, please see the Public Transit section on page 22.

Ports + Waterways

Research shows that transporting by ship is the most fuel-efficient method of transportation, being 8 times more efficient than trucking and 2 times more efficient than rail. Freight movement on waterways also alleviates traffic on the nation's highways and reduces greenhouse gas emissions associated with tractor-trailers.

Port of Albany-Rensselaer

The Port of Albany-Rensselaer is a deep, inland, public international port. The Port has facilities on both sides of the Hudson River, is the second most active cargo seaport in the state, and possesses heavy lift, on-dock rail capabilities and the largest grain elevator east of the Mississippi River.

The Port of Albany is a major contributor to the regional economy; in 2015, it supported 1,400 jobs and contributed \$800 million to the economic output of the region. It receives twice-weekly barge service to and from the Port Authority of New York and New Jersey, as part of the Inland Distribution Network, and is considered a regional distribution hub for the northeastern U.S. and parts of Canada. It is also one of the four intermodal facilities in the county. It has rail connections to CSX, CP, and NS, interstate access via I-87 and I-787, and access to national and international waterbodies via the Hudson River, Erie Canal, and Champlain Canal.

To support additional growth and support its mission to increase commerce and job opportunities, the Port of Albany has invested \$95 million of public and private funding into infrastructure improvements in recent years. In addition to this recent investment, has several planned projects that will continue to expand economic development opportunities in the County. These ongoing/upcoming projects include:

- Construction of a roll on/roll off ramp and corresponding demolition work to improve stevedore access is expected to be completed in the Summer of 2019. Upon completion, this will be the first roll on/roll off ramp in the northeast region.
- Securing private investment to develop an 11-acre parcel owned by the Port on the west side of the Hudson River and to lease a 2-acre parcel owned by the Port on the east side of the Hudson River.
- \$10-\$15 million planned terminal improvements and road reconstruction (currently in the engineering and design phase), including new construction of a 60,000 square-foot maritime warehouse/transit shed and reconstruction of the Port's entire maritime terminal.
- Redevelopment of an 80-acre parcel recently acquired by the Port. The site has rail access and the Port is currently preparing the site (planning, permitting, utility connections) for private redevelopment. This redevelopment represents one of the largest industrial/commercial developments in Albany County and has the potential to create many new jobs. Target industries include light manufacturing, assembly, warehouse, distribution, and logistics services.
- Under consideration by New York State to serve as a potential robust manufacturing site for offshore wind.

Port of Coeymans

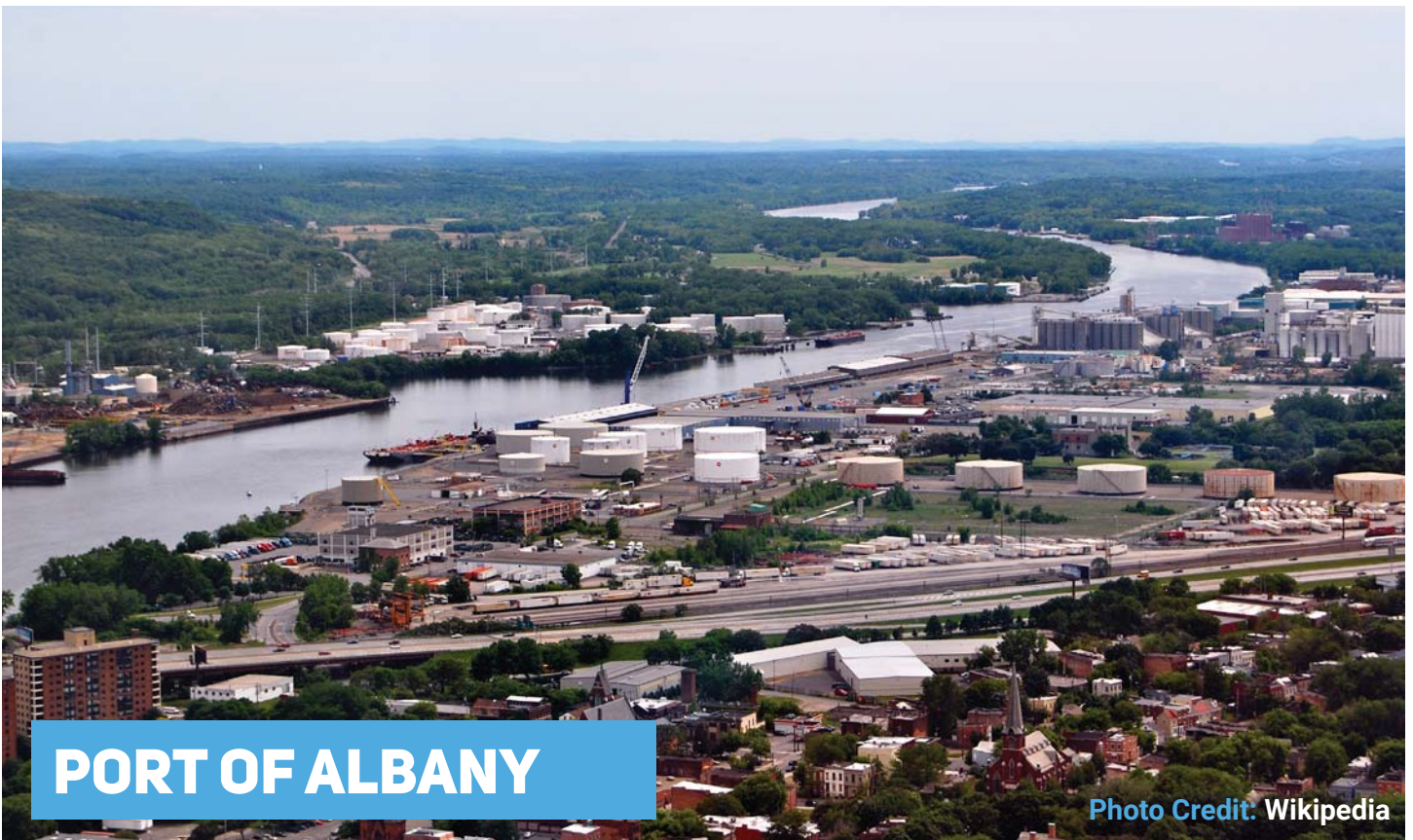
The Port of Coeymans is located 10 miles south of the Port of Albany and 100 miles north of New York City. It is a privately-owned, deep water marine terminal that can accommodate ships up to 750 feet long and provides tug, barge, heavy lift, and break bulk services.

Like the Port of Albany, the Port of Coeymans has been short-listed by the State of New York as a potential robust manufacturing site for offshore wind. The Ports of Albany and Coeymans are the only two upstate ports being evaluated for their potential role in the offshore wind supply chain by the State.



PORT OF COEYMANS

Photo Credit: Port of Coeymans



PORT OF ALBANY

Photo Credit: Wikipedia

EXISTING CONDITIONS: **FREIGHT**

TRANSPORTATION

Rivers and Canals

In the Capital District, the Erie Canal is coterminous with the Mohawk River. As part of the New York State Canal System, the Erie Canal connects Albany west to the Port of Buffalo and provides access to Canada via the Port of Oswego. The Hudson River, which is designated by U.S. Department of Transportation as Marine Highway 87, connects the county south to New York City and the Port Authority of New York and New Jersey.

Air

The Albany International Airport (ALB) is the region's dedicated hub for cargo operations. It handles regularly-scheduled commercial air cargo, including FedEx, UPS, and DHL, as well as passenger flights. In 2014, ALB averaged 5 cargo plane landings per day and 157 per month. The airport also provides intermodal connectivity, with immediate access to I-87.

Development Limitations

Trucking

Truck parking and rest areas are lacking in the Capital District's regional core, particularly near the Port of Albany and the Albany International Airport. It is important to improve and increase truck parking and rest areas near these freight hubs in order to promote intermodal transit, enable the fluid movement of goods, and address safety concerns.

While road and bridge conditions are generally good on the Freight Priority Network, preventative maintenance and regular inspections are critical to ensuring the quality and functionality of this infrastructure.

Rail

The CSX River Line between the Selkirk Rail Yard south to New Jersey was identified in the 2009 NYS Rail Plan as one of the most severe bottlenecks in the state due to single-tracking, outdated tunnel clearances, and at-grade crossings.



Albany Basin: the eastern terminus of the Erie Canal. Photo credit: Discover Albany

TRANSPORTATION

Ports + Waterways

The CDTC identified multiple development limitations related to the Capital District's water transit capacity, including:

- Limited rail service at the Port of Coeymans
- Lack of facilities and infrastructure at the Port of Albany to accommodate increasing demand
- Accumulation of sediment, creating shallower conditions on the south side of the Port of Albany

Air

I-87 Northbound is not directly connected to Albany Shaker, which provides direct access to the Albany International Airport. However, recent public investment is funding the reconfiguration of Exit 4 on I-87 to improve access to the Airport and relieve congestion issues.

Opportunities

The County's freight infrastructure is robust and plays a critical role in connecting local and regional economies to markets across the country and Canada; however, several opportunities exist to improve the County's freight infrastructure and foster future economic development.

Trucking

- Conduct a feasibility study to identify suitable locations along the highway system in Albany County to: expand the transportation and warehousing industry; increase truck parking and rest areas to improve safety and attract more women to the industry; and, establish "truck ports" in preparation for driverless trucking technologies. This analysis should include an assessment of exit interchanges and local zoning codes to identify areas that can accommodate and are compatible with high volumes of truck traffic, as well as necessary changes to local laws to allow uses associated with the freight industry.

- Coordinate closely with NYSDOT and municipalities in the identification and development of new intermodal centers, regional distribution hubs, and "truck ports" to ensure freight-generating activities are compatible (or appropriately mitigated) with adjacent land uses, local policies, and community visions for future development.
- Collaborate with the CDTC to prioritize reconstruction of functionally obsolete or structurally deficient bridges that impact the movement of goods throughout the region.

Rail

- Identify, prioritize, and fund key infrastructure improvements to relieve rail bottlenecks, such as tunnel and at-grade rail crossing improvements.

Ports + Waterways

- Provide financial support to help leverage state and federal funds for capital projects at the ports.
- Expand the Port of Albany's capacity and operations by dredging the south side of the port, extending the wharf, constructing a storage building for heavy lift cargo, and reconstructing deteriorated roadways.
- Extend rail service from the CSX junction at Lafarge Cement to the Port of Coeymans to increase productivity, reduce transportation costs for the Port's tenants, and grow the Port's local employment base.
- Partner with the Port of Albany to establish a workforce-training program. The planned redevelopment of the Port's newly acquired 80-acre site will result in many new jobs, creating an opportunity to offer workforce development in many different sectors, from Port operations to distribution and logistics.
- Establish a link for communications between the County and the ports to better integrate economic development efforts. For example, the County should work with the Ports of Albany and Coeymans to establish Albany County as a critical component of the offshore wind supply chain, unlocking the potential of this multi-billion dollar industry.

TRANSPORTATION

PUBLIC TRANSIT

Importance to Economic Development

Developers are increasingly considering public transit as a primary component of necessary infrastructure, along with roads, water, and power. For city dwellers with jobs in the suburbs or for those with limited mobility options, public transit is essential for commuting and accessing goods, services, and healthcare. In Albany County, access to transit is particularly important as more than 12% of households do not have access to a vehicle – the highest percentage in the region.

Transit can also relieve congestion, reduce energy consumption, and stimulate economic growth around stations and nodes. Indeed, transit-oriented development – or development near transit hubs – is often used to enhance tax revenues, revitalize downtowns, and encourage business growth.

Existing Conditions

Bus Service

The Capital District Transportation Authority (CDTA) is the primary public transit provider in the Capital District. It works to enhance mobility in the region through the provision of local, commuter express, and paratransit services. Its fleet includes approximately 270 buses that travel on 50 routes between Albany, Schenectady, Troy, and Saratoga. Most riders (70%) use CDTA services to commute to work while the remaining trips are for medical, educational, or recreational purposes.

Bus Rapid Transit

BRT service is often used as a building block toward an exclusive right-of-way system – also known as guideway transit – where buses are given dedicated lanes. CDTA currently operates one bus rapid transit (BRT) route: the BusPlus Red Line connecting Albany and Schenectady along a 17-mile stretch of Route 5, and providing access to regional landmarks including: Proctor's Theater, Schenectady Community College, Colonie Center, the Capitol Building, Empire State Plaza, and Downtown Albany. The Red Line has limited stops and priority

movement over vehicles at traffic signals so that it can provide more rapid, high-frequency service than the rest of the CDTA fleet. Its buses and stations also have more amenities, including real-time route information and complimentary Wi-Fi service.

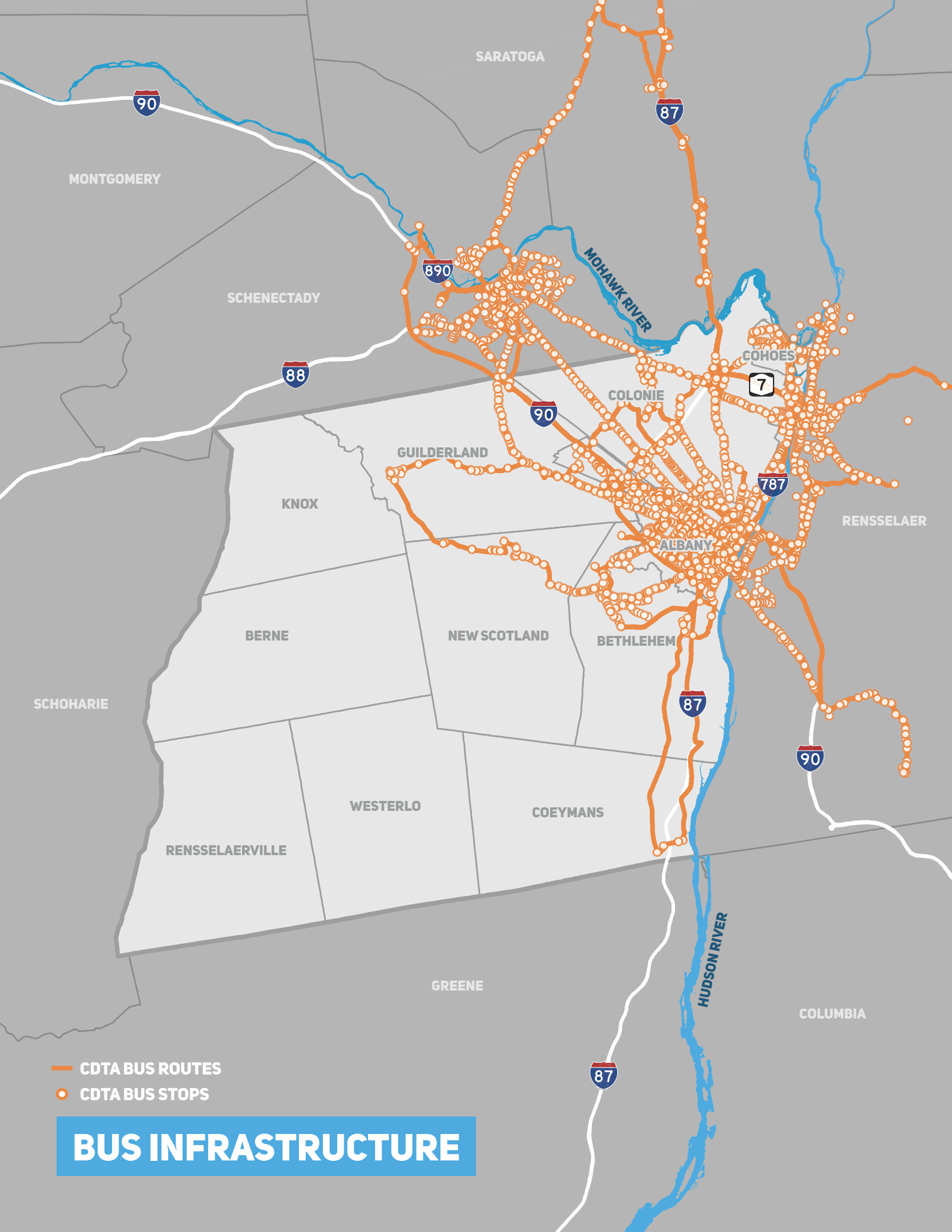
CDTA is in the process of expanding BRT service to a footprint of 40 miles by adding two, new lines along the region's busiest transit corridors. The Purple Line will run along Washington and Western Avenues through urban neighborhoods and business districts connecting Crossgates Mall, multiple University of Albany campuses, the College of Nanoscale Science and Engineering, the Harriman Office Campus, and the College of Saint Rose. The Blue Line will run along the Hudson River connecting Albany, Cohoes, Menands, Troy, Waterford, and Watervliet.

Capital City Trolley

CDTA operates a free trolley service on Thursday, Friday, and Saturday nights from 5:00 PM to 12:30 AM to link Albany's urban neighborhoods to downtown attractions including: the Albany Capital Center, the Times Union Center, the State Capitol, the Palace Theatre, the Corning Riverfront Park, Quackenbush Square, the Riverfront Parking Garage, and the Washington Avenue Armory. The trolley service supports downtown businesses, encourages economic development in the business district, and promotes downtown Albany's nightlife scene.

ACCESS and STAR Programs

ACCESS Transit Services, a subsidiary of CDTA, arranges senior transportation for Albany County residents who do not own a car to their non-emergency medical appointments, grocery shopping, and adult day programs. The STAR (Special Transit Available by Request) service offers transportation to people who cannot use or have difficulties using CDTA's fixed-route buses because of a disability or impairment. These programs are important for ensuring mobility for population groups in the region with limited access to other modes of transportation.



- CDTA BUS ROUTES
- CDTA BUS STOPS

BUS INFRASTRUCTURE

EXISTING CONDITIONS: PUBLIC TRANSIT

TRANSPORTATION

Fares and Universal Access Program

The base fare for CDTA rides is \$1.50 and \$2.00 for BusPlus BRT rides. Seniors, disabled persons, and veterans pay half-priced reduced fares. CDTA has also partnered with local colleges, Albany Medical Center, the Albany International Airport, and ShopRite to provide free transit to students and employees who use their work- or school-issued ID cards to board the bus; participating employers cover the cost of transit for their employees at a subsidized rate. CDTA also operates a corporate partnership program, which includes over 100 companies that subsidize bus rides for their employees. This corporate partnership program can make businesses particularly attractive to employees, helping them compete for the best talent, expand their labor pool, reduce on-site parking requirements, and position themselves as environmentally-responsible.

Demand Response

CDTA is currently in the process of implementing a pilot program, in partnership with TransLoc, to integrate ridesharing into the traditional transit model. TransLoc's program would use real-time data and demand response to allow for small deviations from fixed bus routes, so that a bus may travel a block or two off route to pick up or drop off riders closer to or at their end-destinations.

Passenger Rail

Amtrak provides passenger rail service through the Capital District. Its lines include: the Adirondack to Montreal, the Maple Leaf to Toronto, the Empire Service to New York City, the Ethan Allen Express to Rutland, Vermont, and the Lake Shore Limited to Syracuse, Rochester, Buffalo, Cleveland, Toledo, and Chicago. These routes connect through the Albany-Rensselaer Station, which is located in Rensselaer County across the Hudson River from downtown Albany. Traffic at the station is largely driven by the Empire Service Line, which is used primarily for commuting between Albany and New York City. The station is operated by the CDTA, and Megabus also runs regular service out of the station to New York City and Ridgewood, New Jersey.

Air Travel

As the Capital District's only international airport, the Albany International Airport is a gateway to the County and the region. The airport serves approximately 1.4 million people per year and provides nonstop services to 25 different destinations in 13 states, Canada, and Washington D.C.



Albany-Rensselaer Train Station. Photo credit: Wikipedia



Albany International Airport. The Airport is currently undergoing \$92 million worth of infrastructure upgrades, including a new parking garage, modernized wayfinding signage, and reconfiguration of Exit 4 on Interstate 87, and terminal renovations to improve customers' experience, expand the airport's capacity, and spur additional economic development. Rendering created by Bergmann Associates.

TRANSPORTATION

The Albany International Airport recently announced a \$92 million project to upgrade and modernize airport infrastructure. This large infrastructure project includes the reconfiguration of Exit 4 on Interstate 87 to provide direct access to the airport and relieve congestion; a new parking garage with direct access to the terminal via a pedestrian walkway; modernized signage and parking access improvements; and, interior renovations to modernize the airport terminal and improve pedestrian amenities.

Development Limitations

Bus Service

The CDTC identified a guideway transit system, where buses operate in an exclusive travel lane, as a “Big Ticket Initiative” in its New Visions 2040 Plan. However, feasibility studies suggest that population and employment in the region are not dense enough to support an extensive, dedicated bus lane system. Despite the inability to make transit improvements at the regional scale, urban centers in the Capital Region offer the greatest potential returns on investment for transit-related improvements; the population groups that are most likely to use transit are concentrated in the Cities of Albany, Schenectady, and Troy.

CDTA’s ability to attract discretionary riders has been impacted by the recent introduction of ridesharing services, like Uber and Lyft, in Upstate New York. CDTA must contend with “last mile” issues that these on-demand ridesharing services do not. While an Uber can pick riders up at their homes and drop them off directly at their destinations, bus riders are often required to walk to or from the bus stop to reach their final destinations. This additional step in the transit process may make public transit less attractive to discretionary riders.

Opportunities

Bus Service

In recent years, with the restructuring of routes, the implementation of the Route 5 BRT, and the rollout of various universal access agreements, CDTA ridership has increased. Opportunities to continue improving public transit and mobility across the County include:

- Prioritize bus frequency, service, and accessibility improvements in dense, urbanized areas and along the highest volume routes to continue increasing ridership
- Promote Transit-Oriented Developments around BRT stations. Such concentrated development patterns encourage travel on foot or by public transit, rather than by car, and support urban centers by fostering a mix of land uses at a walkable scale.
- Collaborate with CDTA to draft and adopt Transit-Oriented Development policies and principles into its ordinances and zoning codes to promote land use policies that concentrate development. Dispersed development is difficult for public transit to serve.
- Coordinate with CDTA in the review of new projects and developments to ensure mobility issues are adequately addressed at the beginning of a project.
- Participate in CDTA’s Universal Access Program to encourage County employees to use public transportation. Participation in this program would not only be attractive to employees, but would also support the County’s sustainability and clean energy initiatives.



Recently renovated CDTA bus stop in downtown Albany.

TRANSPORTATION

BICYCLE INFRASTRUCTURE

Importance to Economic Development

Although bicycle routes and trails are not used for commerce or shipments, they are still important to the economic development of a region. Such infrastructure provides an additional amenity to residents and increases quality of life, which developers consider as an important factor when determining where to site projects. Such infrastructure can also generate business, with more than 50% of people indicating they would be more likely to patronize a business if it was bicycle- or pedestrian-friendly. The existence of these trails also encourages recreational tourism, which can generate significant revenues for the entire region.

Existing Conditions

Mohawk-Hudson Bike-Hike Trail

The Mohawk-Hudson Bike-Hike Trail is an 86-mile trail that runs from Little Falls to Albany. Much of the trail is off-road, following the old Troy & Schenectady Railroad. In some portions, the trail leaves the railbed to follow local roads. The trail's southern trailhead is located at the Corning Preserve. From this point, the trail travels off-road along the Hudson River. It moves on-road in Watervliet and Green Island before going off-road again to roughly parallel the Mohawk River through Cohoes and Colonie.

Albany County Helderberg-Hudson Rail Trail

Recently completed, the Albany County Helderberg-Hudson Rail Trail is a rails-to-trails project that converted a 9-mile stretch of the old Delaware and Hudson Railroad between the Port of Albany and Voorheesville into a public, multimodal, recreational trail. Potential exists to link the eastern terminus of this trail to the Mohawk-Hudson Bike-Hike Trail's southern terminus at the Corning Preserve. The City of Albany is presently working with a consultant to design this link, known as the South End Connector.

Empire State Trail

When completed in 2020, the Empire State Trail will be a continuous 750-mile route spanning New York State

in two trail segments: the Hudson Valley Greenway Trail connecting New York City to Canada and the Erie Canalway Trail connecting Buffalo to Albany. In Albany County, the Empire State Trail will follow the Mohawk-Hudson Bike-Hike Trail. The City of Albany will also serve as the crossroads for the two trail segments, which will likely provide quality of life benefits for residents and encourage recreational tourism in the area.

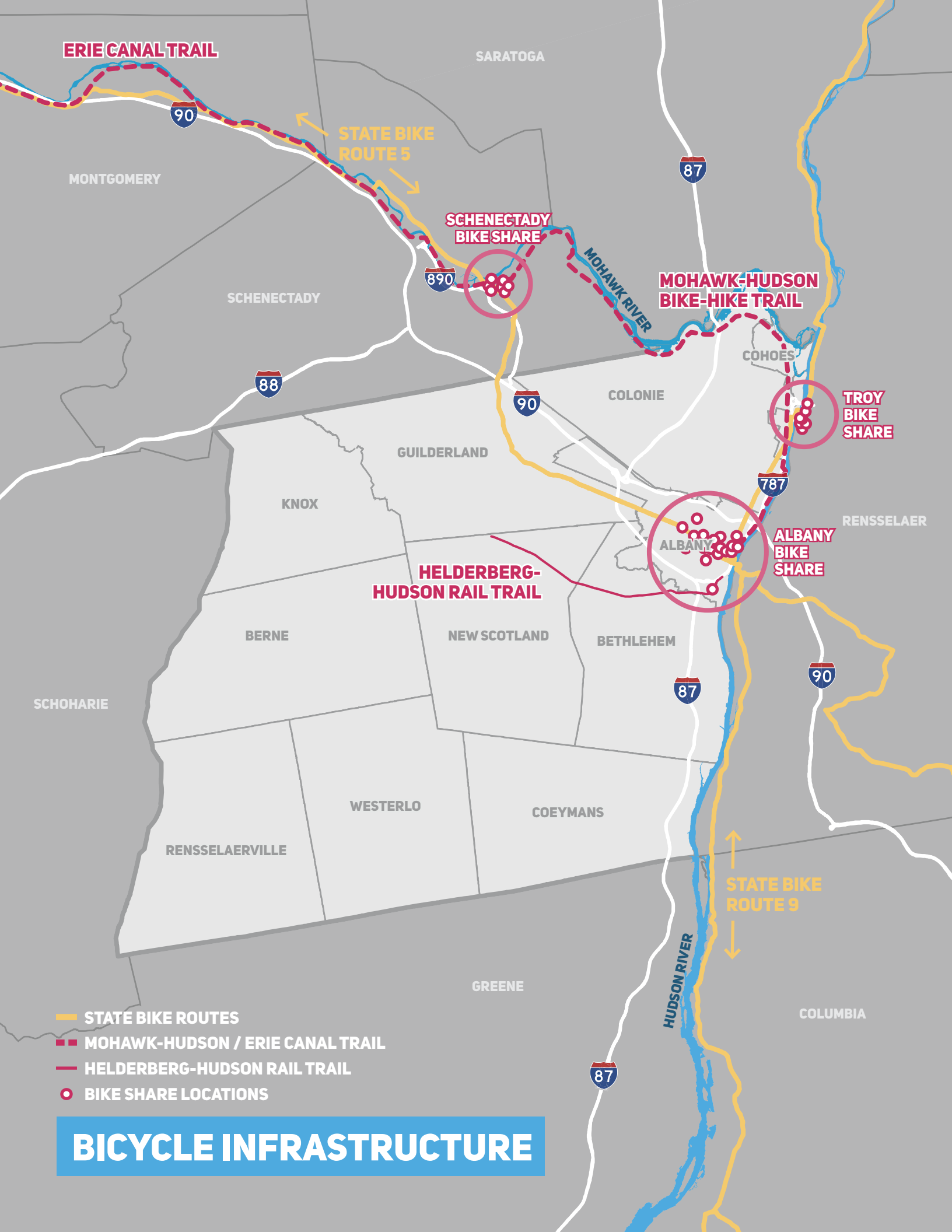
Local Trails

Several other bike trails are located throughout the County including:

- The Albany Shaker Trail. A 1-mile trail in Colonie that runs along the edge of Shaker Ridge Country Club and connects the Ann Lee Nature Preserve to the British American and Airport Park developments.
- The Crossings of Colonie. A 6.5-mile, paved, multi-use trail that runs through the Crossings of Colonie Park.
- Town of Bethlehem Trails. The Town of Bethlehem offers 5 miles of signed, on-road bike routes and a 0.5-mile off-road trail along the edge of Elm Avenue Town Park.
- Rensselaer Lake Trail. A 1-mile paved trail that runs through the Rensselaer Lake and Albany Pine Bush Preserves.

State Bike Route 5

State Bike Route 5 is a 365-mile, shared highway route that extends from Niagara Falls to the Massachusetts state line and roughly parallels the Erie Canal. Approximately 14 miles of the route are located in Albany County, beginning in the Town of Guilderland along Route 146 before linking up with Route 20 to move through the City of Albany.



- STATE BIKE ROUTES
- - - MOHAWK-HUDSON / ERIE CANAL TRAIL
- HELDERBERG-HUDSON RAIL TRAIL
- BIKE SHARE LOCATIONS

BICYCLE INFRASTRUCTURE

EXISTING CONDITIONS: BICYCLE INFRASTRUCTURE

TRANSPORTATION

State Bike Route 9

State Bike Route 9 is a 345-mile, shared highway route that extends from New York City to the Canadian border at Quebec. The route only enters Albany County for a brief 8-mile stint, extending from the Green Island Bridge along Broadway south to the City of Albany before crossing the River and exiting the County on the Dunn Memorial Bridge.

Bike Share

In 2017, the CDTA in partnership with CDPHP – a community-based, not-for-profit health insurance provider – implemented a bike share program known as CDPHP Cycle! in Albany, Schenectady, Troy, and Saratoga Springs to encourage alternative transportation and promote healthy living. The bike share program presently has about 2,000 members region-wide, with usage being highest in Albany, followed by Saratoga Springs and Troy.

There are 35 rental locations in the City of Albany where cyclists can use a smart phone application to pay for a bike, automatically unlock it from the rack, and ride. Bikes can be returned to any rack in the city with an open spot. Bikes can be rented for a \$5 hourly rate or cyclists can purchase a monthly or seasonal membership, which allows for 60 minutes of free riding time daily. Data from 2017 indicates that most bike share users ride for short trips – on average 2.8 miles – like commuting to work, running errands, or traveling around downtown.



Bike Share. With over 2,000 members region-wide, the Capital District's bike share program provides affordable access to bicycles, expanding recreational opportunities and helping to bridge the gap between the terminus of public transit and a user's final destination (i.e., the last mile). Photo credit: Mark Schultz for the Daily Gazette

TRANSPORTATION

Development Limitations

Riverfront areas and towns and villages along the Helderberg-Hudson Rail Trail are well-served by bicycle infrastructure, as well as urban areas where bike share stations are located and some bike lanes exist. In general, however, bicycle infrastructure is underdeveloped in Albany County. Identifying and addressing gaps in the County's bicycle network is necessary to:

- Establish a viable, efficient, and emission-free transportation network
- Improve connectivity within and between scenic rural areas and urban centers where employment is concentrated
- Spur economic development by increasing bicyclist and pedestrian traffic

Opportunities

Expanding and improving of the County's bicycle network will create new and enhanced recreational opportunities, increase connectivity throughout the County, develop a unique sense of place, and improve quality of life for residents. All of these benefits will help retain existing and attract new residents and businesses, and in turn, spur economic development. Specific opportunities to improve County's bicycle infrastructure, include:

- Support municipalities in developing new or updating existing bicycle master plans (e.g., City of Albany's Bike Master Plan was created in 2009) as a strategy to mitigate congestion and encourage active transportation and healthy living.
- Work with CDTC to implement their recently released Capital District Trails Plan in Albany County and facilitate coordination at the local and regional scales.
- Focus on eliminating gaps in the county's trail system by following the CDTC's Bicycle Pedestrian Priority Network recommendations and promoting connections between trails and other recreational destinations.

- Standardize wayfinding signage along county and regional trail systems. A cohesive signage system would enhance the recognizability of the county's trail network, further the region's identity, and distinguish the county's trail network as a destination for both local and out-of-county tourists.
- Collaborate with the CDTC to promote existing trail networks by creating and distributing promotional materials (print and web-based). The Mohawk-Hudson Bike-Hike Trail Map and the Capital District Regional Bike-Hike Trail Map are the two most popular CDTC printed materials (with over 30,000 copies distributed in the last decade), thereby demonstrating significant interest in bicycling in the region. These maps were last modified in 2004 and 2006, respectively, and require updates to include new trail connections and modernize the aesthetic.
- Develop a plan for the Albany County Helderberg-Hudson Rail Trail that identifies future priority land acquisitions and/or easements for trail expansion, trailheads, and park space; establishes an approach for promoting businesses adjacent to the trail; and, defines a marketing strategy that emphasizes the trail as a connective spine between multiple municipalities.
- Identify and implement capital projects that connect bicycle, pedestrian, and public transit networks to create a robust multimodal system. While some county residents may prefer to bike and take public transit for environmental considerations, others rely on this network because they do not have access to a vehicle.
- Develop a platform for collecting and displaying crowd-sourced information related to bike routes throughout the County in order to create a comprehensive database of scenic bike rides.

EXISTING CONDITIONS

WATER + WASTEWATER

INTRODUCTION

All sectors of the economy rely on water supply and wastewater removal and treatment systems. The availability, capacity, reliability, and affordability of water and wastewater systems should be assessed in the early stages of project development to ensure these critical systems can support new development and redevelopment without adversely impacting existing service, water quality, and water supply. Siting new development in areas where drinking water and waste water infrastructure already exists and has sufficient capacity will reduce development costs, minimize environmental impacts, and improve the health and quality of life for residents.

This section addresses the following topics:

- Water supply infrastructure, including treatment plants and distribution systems
- Wastewater infrastructure, including treatment plants and sewer, stormwater, and combined sewer systems
- Development limitations related to water supply and wastewater systems
- Opportunities to improve these systems and encourage economic development

WATER SUPPLY

Importance to Economic Development

Reliable access to clean water for drinking, commercial and industrial activities, and public safety (e.g., fire fighting) is an important public service in densely populated and urbanized areas. It is particularly important that municipal water supply systems have the capacity to meet current and future demands and are resilient enough to continue providing reliable and quality service to customers even during emergencies (e.g., water main breaks or other disruption in service).

Existing Conditions

Public water service in Albany County is provided at the municipal level. The County does not own or operate any water supply infrastructure. However, the County Department of Health is responsible for permitting individual water supplies in areas where access to municipal water supply infrastructure is not available.

City of Albany

In the City of Albany, the Albany Water Board and the City's Department of Water and Water Supply work together to supply customers with a reliable and high quality source of water by managing three storage and distribution reservoirs and operating water filtration and conveyance infrastructure. In addition to serving City residents and businesses, the City of Albany's provides pre-treated water to the towns of Bethlehem and Guilderland (Colonie in the near future) through municipal interconnects.

The City of Albany's water supply system produces approximately 30 million gallons of water per day, with peak demand averaging 25 million gallons per day. The primary source of water for the City of Albany is the Alcove Reservoir, which is located in the Town of Coeymans and provides 12 billion gallons of storage. The Basic Creek Reservoir is located in the Town of Westerlo; it provides over 700 million gallons of storage and directly feeds the Alcove Reservoir. The Loudonville Reservoir is located in the Town of Colonie and consists of three concrete basins that serve as staging areas for finished drinking

EXISTING CONDITIONS: **WATER SUPPLY**

WATER + WASTEWATER

water. This reservoir has a capacity of 200 million gallons (approximately 10 days of water supply for the City of Albany) and is equipped with a UV treatment facility that treats all water prior to distribution for public use. To protect the City's water supply, the Water Board owns and manages approximately 6,600 acres of forested land surrounding the Alcove and Basic Creek Reservoirs, which provides an important buffer and natural filtration system. The Department of Water and Water Supply also operates the Feura Bush Water Treatment Facility located in the Town of Bethlehem, which processes up to 32 million gallons of water per day.

Several other municipalities in Albany County, including Colonie, Guilderland, Bethlehem, Watervliet, Cohoes, and Green Island, independently own, manage, and operate water supply infrastructure, including filtration plants, distribution infrastructure, and water mains and valves.

Town of Colonie

The Town of Colonie is served by the Latham Water District. This system produces approximately 31 million gallons of water per day, with peak demand averaging 23 million gallons per day. The Water District derives its water from the Mohawk River, five wells located at the Mohawk View Water Treatment Plant, and the Stony Creek Reservoir located in Clifton Park (emergency back-up supply) and provides water to over 82,000 residential customers and several industrial and commercial businesses. Prior to distribution, all water is treated at the Mohawk View Water Treatment Plant. In the next year, the Latham Water District plans to sell the Stony Creek Reservoir and its surrounding 1,000 acres to the Town of Clifton Park and connect to the City of Albany's water supply system. The City of Albany's water supply will serve as an emergency back-up water source for the Town of Colonie and the Town's water supply will serve as an emergency back-



ALCOVE RESERVOIR

Photo Credit: Wikipedia

EXISTING CONDITIONS: **WATER SUPPLY**

WATER + WASTEWATER

up for the City of Albany. This \$3.2 million capital project will create two municipal interconnects, allowing for the exchange of millions of gallons of water between the two water supplies and increasing the reliability and resiliency of the water systems during emergencies.

Town of Guilderland

The Town of Guilderland's water supply is managed by the Department of Water and Wastewater Management and is supplied by three primary sources: the Watervliet Reservoir, three wells owned by the Town, and fully treated water purchased from the City of Albany (up to 2 million gallons per day). The Town also owns four water storage tanks with a total storage capacity of 5 million gallons. The Town of Guilderland Water Treatment Plant processes water from the Watervliet Reservoir, which is the Town's primary source of raw water, and is designed to operate at a capacity of 5 million gallons per day. The three Town-owned wells are only used to supplement the reservoir water supply and NYS DEC limits the total withdrawal rate from the wells to 0.5 million gallons per day on an annual basis. Overall, the Town's water supply capacity is 8.5 million gallons of water per day and average demand is 2.6 million gallons per day.

Town of Bethlehem

The Town of Bethlehem's water supply infrastructure is managed and operated by the Town's Water Division within the Department of Public Works and predominantly serves developed areas where roadway infrastructure is present. The Water Division has a total water supply capacity ranging from 11.08 to 12.35 million gallons per day and obtains its water from four primary sources: Vly Creek Reservoir (3 million gallons per day capacity), New Scotland Wellfield (0.85 million gallons per day capacity), Selkirk Wellfield (6 million gallons per day capacity), and the City of Albany Aqueduct (1.23-2.5 million gallons per day capacity). The Town has 20-year contract with the City of Albany to obtain water via the Albany Aqueduct; this agreement expires in 2023. The Water Division also operates two water treatment plants with a combined maximum capacity of 12 million gallons per day. The

average day demand projection for 2019 is 7.3 million gallons per day and the projected peak day demand for 2019 is 10.85 million gallons per day, with demand projected to steadily increase through 2040.

City of Watervliet

The City of Watervliet's Water and Sewer Department is responsible for providing residents and businesses with water and maintaining the City's water and sewer mains. The City's water source is the Watervliet Reservoir, located in the Town of Guilderland, and all water from the reservoir is treated at the Watervliet Water Treatment Plant prior to distribution. The City's water supply produces an average of 2.6 million gallons per day; average daily demand is 2.1 million gallons and demand peaked at 2.5 million gallons per day in 2017.

City of Cohoes

The City of Cohoes' Water Bureau is responsible for the production and distribution of water to City residents and businesses. The City's primary source of water is the Mohawk River; water is pumped from the river to a 75-million-gallon Raw Water Storage Reservoir, where the water is treated prior to distribution. In addition to serving over 4,000 residential service connections and 60 industrial connections in the City, the City's Water Bureau also supplies Green Island and a small portion of the Town of Colonie with water. The City's average daily demand is 2.3 million gallons, and demand peaked at 3.3 million gallons per day in 2017.

Village of Green Island

Green Island's water supply is managed and maintained by the Water and Sewer Department. The Village's water is obtained from two primary sources: a well and pre-treated water from the City of Cohoes. The interconnection with the City of Cohoes primarily serves as an emergency back-up. The Village operates a ground water filtration plant that serves 1,200 service connections and a population of 4,000. Average daily demand for water in the Village is 587,412 gallons, and demand peaked at 840,100 gallons per day in 2017.

EXISTING CONDITIONS: **WATER SUPPLY**

WATER + WASTEWATER

Rural Municipalities

Albany County's more rural municipalities (Berne, Knox, Rensselaerville, Coeymans, New Scotland, and Westerlo) primarily rely on private wells and underground aquifers. Villages and hamlets within these rural towns, where populations are more concentrated, often have access to public water infrastructure (e.g., Hamlet of Rensselaerville, Village of Ravena, Village of Voorheesville). For example, the Village of Voorheesville's water supply system serves approximately 3,200 people and obtains water from three drilled wells; the Village's average daily demand is 322,000 gallons per day, with peak demand reaching 731,000 gallons per day.



WATERVLIT RESERVOIR

Photo Credit: Roger Lipera

WATER + WASTEWATER

Development Constraints

Like much of New York State, Albany County's water supply infrastructure (treatment facilities and distribution systems) is old and in need of significant upgrades. In fact, the New York State Comptroller's Office estimates that the State's water systems require nearly \$40 billion in repairs and improvements. This aging infrastructure is susceptible to deterioration, leading to leakages, contamination, and in some cases, large-scale disruptions, such as water main breaks. For example, according to the City of Cohoes' 2017 Annual Water Quality Report, approximately 43% of the City's water supply was lost in the distribution system due to leakages, water main breaks, and other unmetered uses, such as firefighting, street cleaning, the Lansing Public Pool, and unauthorized

withdrawals. The Village of Green Island's water system also had a high percentage (38.4%) of loss in 2017 due to leakages, firefighting, and the flushing of water mains. These leakage rates are very high when compared to the national average of 16%. The volume of water losses in Green Island is equivalent to 20 backyard pools per day, and the volume of water losses in Cohoes is equivalent to 45 back yard pools per day.

Water is a valuable resource and controlling losses is important from a conservation and economic standpoint for municipalities, as lost water represents lost revenue. Furthermore, upgrades to water treatment and conveyance infrastructure is a pressing issue for all municipalities, as deteriorating infrastructure can lead to unreliable service, contamination, public health emergencies, and additional treatment costs.

AGING INFRASTRUCTURE LEADS TO SINKHOLES IN ALBANY

In August 2016, a major water main burst in the City of Albany, resulting in a sinkhole so large it swallowed an SUV. The 42-inch water main that broke was approximately 85-years-old and is representative of Albany's aging water supply system. The sinkhole blocked access to a large apartment building, temporarily displacing nearly 100 people. Nearby, another high-rise apartment, primarily serving disabled and elderly residents, lost access to water and surrounding neighborhoods experienced extremely low water pressure. The sinkhole also impacted water service in the Towns of Guilderland and Bethlehem, which have interconnects with the City of Albany's water system.

Another water main burst in August 2018, creating a sinkhole and closing the major intersection at N. Main and Washington Avenues. The broken water main was 114-years-old and created a 6-foot wide and 8-foot deep sinkhole.

Safe drinking water is a basic need and an inherent expectation of municipal water systems. Contamination can come from a variety of sources, including industrial activities, inadequate treatment, combined sewer overflows, agricultural and stormwater runoff, and the corrosion of aging pipes (often comprised of lead or iron) can lead to the leaching of lead and/or copper into drinking water. The Mohawk River is a primary source of drinking water for the Town of Colonie, the City of Cohoes, and the Village of Green Island. Within Albany County, several industrial uses are permitted to discharge stormwater directly into the Mohawk River or into tributaries that flow into the Mohawk River, including the Town of Colonie's landfill. The protection of drinking water sources from known and emerging contaminants is imperative and requires land use and discharge regulation, diligent monitoring and testing, prompt action when contaminants are detected, and timely notification of the public when violations are detected.

Understanding current and future water demand is critical to ensuring water supply systems have sufficient capacity and are resilient to unforeseen emergencies or disasters. Several municipalities in Albany County rely on interconnects between water supply systems to provide access to water in emergency situations. Several municipalities also implement water conservation measures to limit water withdrawals. For example, the Town of Bethlehem restricts the use of water for sprinkling

WATER + WASTEWATER

lawns to mornings and evenings. While these measures reduce strains on public water systems and help ensure reliable service, a comprehensive understanding of the current and projected water demands of Albany County and the capacity of the County's municipal water supply infrastructure is needed to ensure the County can sustainably accommodate future growth.



ALBANY WATER FORESTLAND

In partnership with the Nature Conservancy, the Albany Department of Water and Water Supply developed a working woodlands forest management plan for the 6,600 acres of land surrounding the Alcove and Basic Creek reservoirs (collectively, the Albany Water Forestlands). These reservoirs are the City of Albany's primary sources of water, and the surrounding forest lands serve as important buffers, filtering runoff and replenishing groundwater supplies. The forest management plan takes a watershed-based approach and is guided by the following goals:

- Maximize the capacity of the forest to promote a clean and continuous supply of water
- Generate revenue and mitigate the impacts of climate change by enhancing carbon sequestration through improved management
- Improve forest health through active management
- Protect rare and unique species, wildlife habitat, and other ecological values on the property
- Provide opportunities for public recreation and enjoyment of the property

The Albany Water Forestlands are owned by the Albany Water Board and implementation of the forest management plan will be undertaken by the Nature Conservancy and the Albany Department of Water and Water Supply.

Opportunities

In order to increase the reliability, quality, and safety of the county's water supply system, the following opportunities were identified:

- Working with Albany County municipalities, conduct a comprehensive analysis of the County's water supply system that considers current and future demand to identify low capacity areas, opportunities for intermunicipal resource sharing, and priority infrastructure upgrades to improve water quality and reliability.
- Collaborate with New York State to secure funding for water system upgrades and repairs.
- Coordinate water infrastructure improvements with roadway and sanitary sewer improvements to reduce costs.
- Prioritize the protection of water sources by undertaking a comprehensive, county-wide land use planning initiative to identify lands critical to the protection of water resources and implement watershed-based management practices on county-owned lands.
- Acquire or obtain conservation easements on lands critical to the protection of water resources to ensure the long-term protection of these lands and the water sources they buffer.

WATER + WASTEWATER

WASTEWATER

Importance to Economic Development

The removal of wastewater is a fundamental need for residents, businesses, and industries. In urban and suburban areas, where development is concentrated, municipalities typically provide public sewer infrastructure and wastewater treatment services. Extending this wastewater infrastructure is costly, and new development should be encouraged to locate within sewer areas. For new industrial developments or water-intensive developments, it is particularly important that municipal sewer districts are engaged early in the planning phases to ensure industrial and commercial discharge requirements are met and that sewer lines and wastewater treatment plants have sufficient capacity to accommodate additional discharges.

Existing Conditions

All of the land area within the Villages of Green Island, Menands, and Colonie and the Cities of Cohoes and Watervliet is sewer, and a majority of the land area within the City of Albany and the Town of Colonie is sewer. Sewer areas in the Towns of Bethlehem, Guilderland, and New Scotland are concentrated along major urbanized roadways and in areas where development is concentrated, such as the Hamlets of Fort Hunter and Guilderland Center and the Villages of Voorheesville, Delmar, Elsmere, and Slingerlands. The rural Towns of Knox, Berne, Westerlo, Rensselaerville, and Coeymans are largely served by private septic systems and have limited municipal wastewater infrastructure.

Albany County Water Purification District

Several sewer districts exist within Albany County. The largest district is the Albany County Water Purification District, which was established in 1968 by a resolution passed by the Albany County Legislature (Article 5A of County law). Prior to establishment, communities were surveyed to assess wastewater removal and treatment needs, documented in the Albany County Comprehensive Sewerage Study (March 1966). Now in operation for over 50 years, the Albany County Water Purification District

serves eight member communities, owns all trunk sewer lines that serve the district, and owns and operates two 4A wastewater treatment plants that provide secondary treatment. The eight member communities served by the Albany County Water Purification District include the:

- City of Albany
- City of Cohoes
- City of Watervliet
- Village of Colonie
- Village of Green Island
- Village of Menands
- Town of Colonie
- Town of Guilderland

Member communities own, operate, and maintain all sewer laterals that tie into the County's sewer infrastructure.

The Albany County Purification Water District's North Water Treatment Plant is located in the Village of Menands and treats 10% of the wastewater from the City of Albany and all of the wastewater from the 7 other member communities. This water treatment plant has excess capacity, and member communities may purchase additional capacity from one another to support future development needs. The South Water Treatment Plan is located at the Port of Albany and treats 90% of the wastewater from the City of Albany, as well as wastewater from the Port of Albany.

The District's treatment plants and trunk sewer lines were constructed with sufficient capacity to enable future expansions. For new developments or industries within member communities that plan to tie into the County's Water Purification District infrastructure, the County's Sewer Ordinance outlines requirements for discharges. Further, industrial discharges for each member community are governed by the District's approved Industrial Pretreatment Program, which ensures compliance with State and federal regulations, prevents interference with

METERED CONNECTIONS TO ALBANY COUNTY SEWER DISTRICT

PATROONS CREEK INTERCEPTOR		HUDSON RIVER INTERCEPTOR	
NO.	DIAM.	NO.	DIAM.
1	18"	1	24"
2	18"	1.8	24"
3	15"	1.9	24"
4	15"	2	24"
5	12"	2.1	24"
6	12"	2.2	14"
7	12"	2.3	14"
8	12"	2.4	14"
9	12"	2.5	14"
10	12"	2.6	14"
11	12"	2.7	14"
12	12"	2.8	14"
13	12"	2.9	14"
14	12"	3	14"
15	12"	3.1	14"
16	12"	3.2	14"
17	12"	3.3	14"
18	12"	3.4	14"
19	12"	3.5	14"
20	12"	3.6	14"
21	12"	3.7	14"
22	12"	3.8	14"
23	12"	3.9	14"
24	12"	4	14"
25	12"	4.1	14"
26	12"	4.2	14"
27	12"	4.3	14"
28	12"	4.4	14"
29	12"	4.5	14"
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WATER + WASTEWATER

the operation of the District's treatment plants, and aids in economic development. Currently, the District has 10 permitted Significant Industrial Users with flows ranging from 25,000 to 2.5 million gallons per day.

The County's Water Purification District regularly undertakes capital projects to maintain and upgrade equipment and improve operations. The District recently signed an intermunicipal agreement with Saratoga County Sewer District to establish a Regional Biosolids Handling Facility. The new facility will house an anaerobic digester that will treat biosolids and sludge generated at the Saratoga, Albany North, and Albany South wastewater treatment plants, as well as biosolid waste from numerous other small treatment plants. The by-product of anaerobic digestion is biogas, and the Water Purification District is currently working to determine the best use for this fuel source. The District has also been engaged in an advisory role in the Albany Pool Communities Combined Sewer Overflow Long Term Control Plan since its inception. Combined sewer overflow points of discharge are owned and operated by municipalities; any improvements made to separate sewers will directly affect the District's operations and capacity.

Other Sewer Districts in Albany County

Several towns in Albany County own and operate wastewater conveyance and treatment infrastructure. While the Towns of Guilderland and Colonie are Albany County Water Purification District members, the County's infrastructure only serves a small portion of Guilderland and about half of Colonie. The Town of Guilderland owns and operates two wastewater treatment plants (NE Industrial Park Sewer Plant and Nott Road Sewer Plant) as well as trunk and lateral sewer lines serving concentrated development along NYS Route 20 and the Hamlets of Fort Hunter and Guilderland Center. The Town of Colonie's Pure Waters Department maintains and operates the Town's sanitary sewer collection system, which serves portions of the Town not included in the Albany County Water Purification District. Colonie's Department of Pure Waters also operates the Mohawk View Water Pollution Control Plant (wastewater treatment) and reviews and issues sanitary sewer connection permits for commercial and residential development.

The Town of Bethlehem's sanitary sewer collection system was established in 1929 and includes approximately 150 miles of sewer mains and 37 pumping stations. The Town's Sewer Division also operates and maintains a wastewater treatment plant that was constructed in 1973 on Dinmore Road and has a design capacity of 6 million gallons per day. In 2017, the Town of Bethlehem was one of ten municipalities selected by New York State to participate in a \$3 million pilot program focused on helping municipalities improve sewer system operations. As part of the pilot program, the Town is working with the New York State Department of Environmental Conservation (DEC), the Environmental Facilities Corporation (EFC), and a private engineering firm to enhance its asset management plan for the Dinmore Road Wastewater Treatment Plant to improve plant efficiency and reduce operating costs.

The Town of New Scotland administers two small sewer districts. The Heldervale Sewer District is located along NYS Route 85 near the Bethlehem town line and is comprised of low-pressure forcemains that discharge to a gravity sewer located in the Town of Bethlehem, which transports wastewater to the Dinmore Road Wastewater Treatment Plant. The Kensington Woods Sewer District serves a new cluster development that is currently under-construction. The Village of Voorheesville, located in the Town of New Scotland, also administers two sewer districts.

The towns of Berne, Rensselaerville, and Coeymans all administer sewer districts, which provide limited service to concentrated development within the Towns. The Towns of Berne and Coeymans also own and operate sewer treatment plants. The Towns of Westerlo and Knox do not administer sewer districts, nor provide municipal sewer services.



Albany County Water Purification District Water Treatment Plant. A water clarifier at the County's water treatment plant, where gravity and buoyancy remove suspended solids and other particulate matter. From here, water moves on to secondary treatment, where bacteria are used to remove organic compounds. Photo credit: WAMC

WATER + WASTEWATER

Stormwater

The Albany County Stormwater Coalition was formed by an inter-municipal agreement to implement stormwater permitting in a coordinated and efficient manner. By helping municipalities comply with stormwater regulations, the Coalition plays an important role in improving the quality of and protecting the region's water resources. The following municipalities and organizations are members of the Coalition:

- Albany County
- City of Albany
- Town of Bethlehem
- City of Cohoes
- Town of Colonie
- Village of Colonie
- Village of Green Island
- Town of Guilderland
- Village of Menands
- Town of New Scotland
- City of Watervliet
- State University of New York (SUNY) at Albany

The Coalition provides members with a comprehensive GIS-database of stormwater infrastructure assets and technical assistance related to stormwater permits, laws, and regulations, such as Municipal Separate Storm Sewer Systems (MS4) permits in urbanized areas, Construction Activity Permits, the development of Storm Water Pollution Prevention Plans (SWPPP), and local laws related to erosion and sediment control. The Coalition is largely funded by NYS DEC to conduct mapping of stormwater assets and also receives a consistent stream of limited funding from membership dues. In addition to paying membership dues, Albany County contributes in-kind services.

In December 2018, the Coalition completed mapping of the County's entire stormwater system, including outfalls, manholes, catch basins, pipes, and pump stations. Starting in 2016, the Coalition also started mapping post-construction stormwater practices (e.g., green infrastructure). While the data is easily accessed by member communities via an online database and mapping system, non-members must request access to the dataset.



Green Infrastructure. A recently constructed wetland in a residential neighborhood in the City of Albany provides residents with flood mitigation, filters water prior to discharge, reduces strain on the City's sewer system during heavy rain events, and creates new habitat. Photo credit: Bergmann

WATER + WASTEWATER

Albany County adopted a green infrastructure policy in 2014. The policy was developed in partnership with the Stormwater Coalition, the County's Department of Public Works, and the County Office of Natural Resources Planning and applies to all projects that will result in a land disturbance of one or more acres. Projects under one acre are also covered by the policy if an opportunity exists to reduce the quantity of stormwater runoff and/or mitigate impacts to natural resources. The policy contains guidance related to project siting, site design standards, natural resource buffers and protection, and facility design.

Combined Sewers

In 2007, the City of Albany, the City of Cohoes, the City of Rensselaer, the City of Troy, the City of Watervliet, and the Village of Green Island (collectively, the Albany Pool Communities) established an inter-municipal agreement to develop a Combined Sewer Overflow (CSO) Long Term Control Plan. The Albany Pool Communities own and operate a total of 92 CSOs that discharge raw sewage directly into the Hudson and Mohawk Rivers, and their tributaries. The primary goal of the CSO Long Term Control Plan is to, "develop a cost-effective, regional solution to achieve water quality standards, maximizing the environmental benefits while considering the financial impacts to the member communities."

In partnership with the Capital District Regional Planning Commission (CDRPC) and the NYS DEC, the Albany Pool Communities plan to implement over 50 projects in the next 15 years that will significantly improve the water quality of the Hudson and Mohawk Rivers, and their tributaries. These projects represent a total public investment of approximately \$136.5 million and include:

- Disinfection
- Waste water treatment process improvements
- System optimization
- Sewer separation and storage
- Green infrastructure programs
- Satellite treatment and floatables control
- Tributary enhancements

Development Limitations

Similar to the County's water supply infrastructure, its wastewater infrastructure is also aging, and in general, requires additional investment in maintenance and upgrades. Aging wastewater infrastructure is an issue statewide and represents a major source of water pollution, particularly due to combined sewer overflows.

The Albany County Water Purification District has sufficient capacity to accommodate new growth within its service area. Approximately half of the member communities have combined sewer systems. The City of Albany has taken major steps to separate its sewer system, and the Cities of Watervliet and Cohoes and the Village of Green Island have also made progress in separating their sewers. However, combined sewers are still a major issue and during periods of heavy rainfall or snowmelt, when capacity of the sewer system or treatment plants is exceeded, these combined sewers discharge untreated, raw sewage directly into the Hudson River.

Wastewater conveyance and treatment infrastructure is limited to suburban and urban areas in the towns of Guilderland and Bethlehem. Due to the constrained footprint of wastewater infrastructure, new industrial, commercial, and housing developments are generally limited to urbanized areas within these towns.

The rural towns of New Scotland, Knox, Berne, Renssaelerville, Westerlo, and Coeymans have very limited municipal wastewater infrastructure. New development with high discharge rates is unlikely to be accommodated in these rural towns unless municipal sewer extensions are made or the development provides its own wastewater treatment services.

Further, the lack of a comprehensive, countywide map indicating the coverage of municipal wastewater infrastructure makes it difficult for developers and new businesses to strategically identify locations that accommodate their needs and also provide necessary public services.

WATER + WASTEWATER

Opportunities

In order to increase the reliability, quality, and safety of the county's water supply system, the following opportunities were identified:

- Working with the Albany County Water Purification District and Albany County municipalities, develop a comprehensive, spatially-explicit, intermunicipal asset inventory of countywide wastewater infrastructure to identify areas suitable for future development and high priority projects to improve the quality and capacity of the County's wastewater system.
- Engage sewer districts early in the project planning process (e.g., during the review of projects referred to the County Planning Board per New York State General Municipal Law, Article 12-B, §239-l, m, and n) to enable sewer districts to work directly with project applicants and collaboratively develop projects that are compatible with the district's capacity. Early engagement with sewer districts is particularly important for proposed commercial or industrial projects with high-volume discharge needs.
- Establish a clear line of communication between the County's sewer district and economic development initiatives that occur in the individual municipalities that the district serves.
- Provide training to encourage County agencies/ departments to use the Stormwater Coalition's robust dataset to inform decision-making and operations and maintenance activities. Currently, only two County staff are registered to use the Coalition's online database, which provides access to stormwater infrastructure information and mapping.
- Partner with the Stormwater Coalition to utilize its stormwater asset inventory in a more proactive manner. Currently, the database is predominantly used to ensure compliance with permitting requirements, but could be leveraged to identify suitable areas for new development, connect land use decisions to stormwater data, strategically target areas with high pollutant loads, track the ability of MS4 programs to improve water quality, and pursue grant opportunities.

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EXISTING CONDITIONS

ENERGY

INTRODUCTION

Energy services are critical to the functioning of other components of the infrastructure system and to daily life. Without electricity, wastewater treatment plants would not function and lights would not turn on. Without gas, many buildings could not be heated and some manufacturing processes would be restricted. Like other infrastructure services, gas and electricity have come to be expected in most areas. As such, developers do not expect to incur significant expenditures for basic infrastructure. Furthermore, projects that do require significant expenditure on the part of the developer for the extension of such services ultimately limit the size of the overall development.

This section addresses the following topics:

- Energy generation from non-renewable and renewable sources
- Energy transmission infrastructure
- Development limitations related to energy infrastructure
- Opportunities to improve these systems and encourage economic development

POWER PLANTS IN ALBANY COUNTY

 **4 HYDROELECTRIC**
60 MW total capacity

 **3 SOLAR**
8.6 MW total capacity

 **3 NATURAL GAS**
1.3 GW total capacity

 **2 LANDFILL BIOGAS**
12 MW total capacity

NON-RENEWABLE ENERGY SOURCES

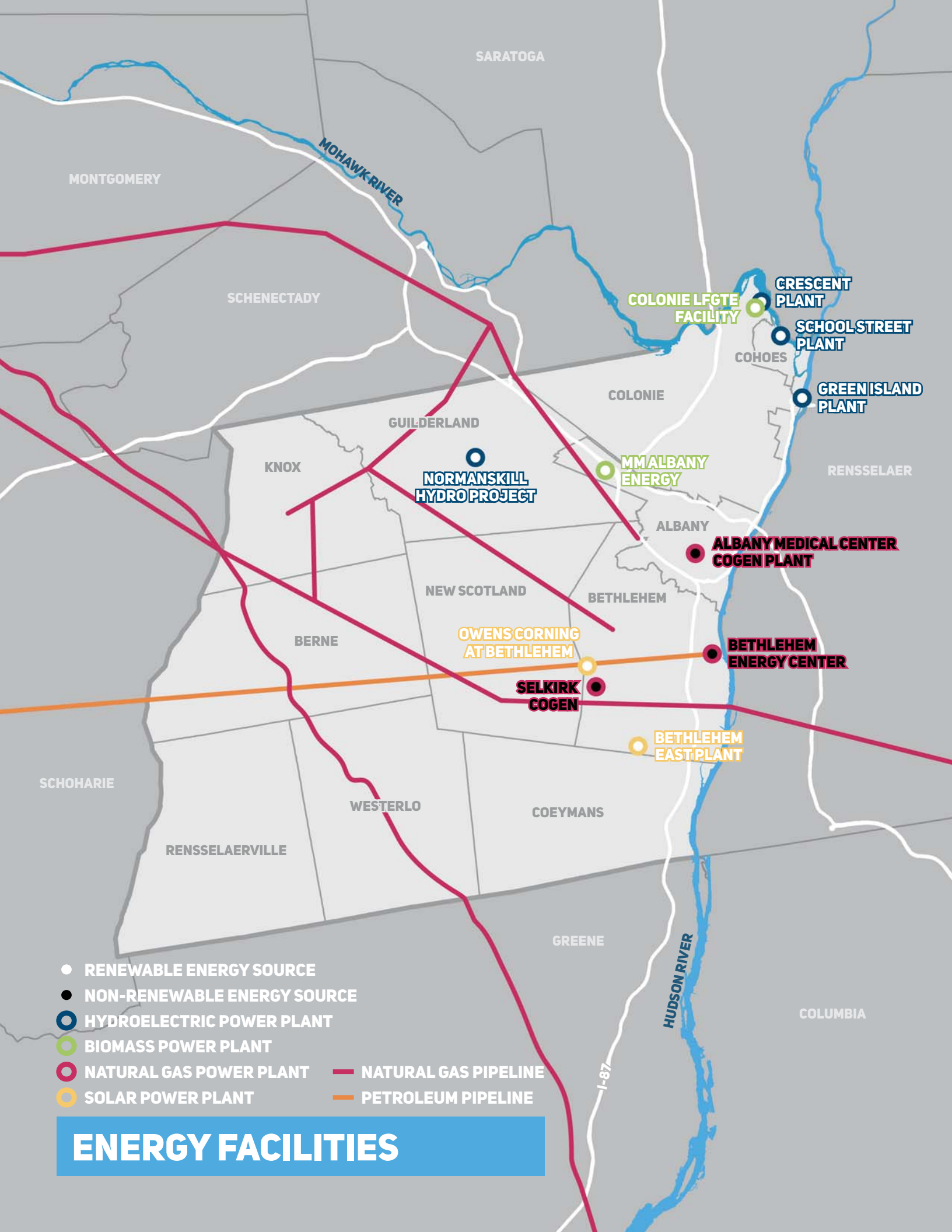
Existing Conditions

Non-renewable energy is derived from materials with a finite supply that require significant energy to extract, such as coal, oil, and natural gas. There are three power plants in Albany County that rely on non-renewable sources to produce energy: the Selkirk Cogen Plant with a capacity of 446 MW, the Bethlehem Energy Center with a capacity of 891.3 MW, and the Albany Medical Center Cogen Plant with a capacity of 4.6 MW.

The Selkirk Cogen Plant is a natural gas fired cogeneration facility that uses natural gas to produce electricity and captures and sells the reject heat from power production for industrial purposes. The plant's owners proposed to deactivate the plant in May of 2018, but decided against it, postponing the shut-down indefinitely. The proposed deactivation triggered a study by the NYISO which concluded that the plant's closing would not impact the reliability of the electric grid in the region.

The Bethlehem Energy Center (BEC) is located along the banks of the Hudson River in Glenmont and is a combined cycle natural gas powered plant that uses the steam exhaust produced from burning natural gas to drive turbines and produce energy. In 2017, the plant operated at full capacity for about 75% of the year and produced 5,300 GWh of energy. For comparison, energy consumption in the Capital Region during that same period totaled 11,800 GWh – indicating that, on its own, the BEC is capable of meeting roughly half of the region's energy need.

The Albany Medical Center Cogen Plant, located at the Albany Medical Center Hospital, is a cogeneration plant that uses a natural gas fired turbine to produce electricity and recovers and reuses the heat created in this process for hot water and sterilization purposes. Most of the electricity produced is used to power the Medical Center, displacing 4,117 kW of peak demand from the grid. The plant's ability to efficiently generate power, reduce emissions, and utilize heat typically wasted by conventional power plants earned it the "Outstanding



ENERGY FACILITIES

- RENEWABLE ENERGY SOURCE
- NON-RENEWABLE ENERGY SOURCE
- HYDROELECTRIC POWER PLANT
- BIOMASS POWER PLANT
- NATURAL GAS POWER PLANT
- SOLAR POWER PLANT
- NATURAL GAS PIPELINE
- PETROLEUM PIPELINE

EXISTING CONDITIONS: NON-RENEWABLES

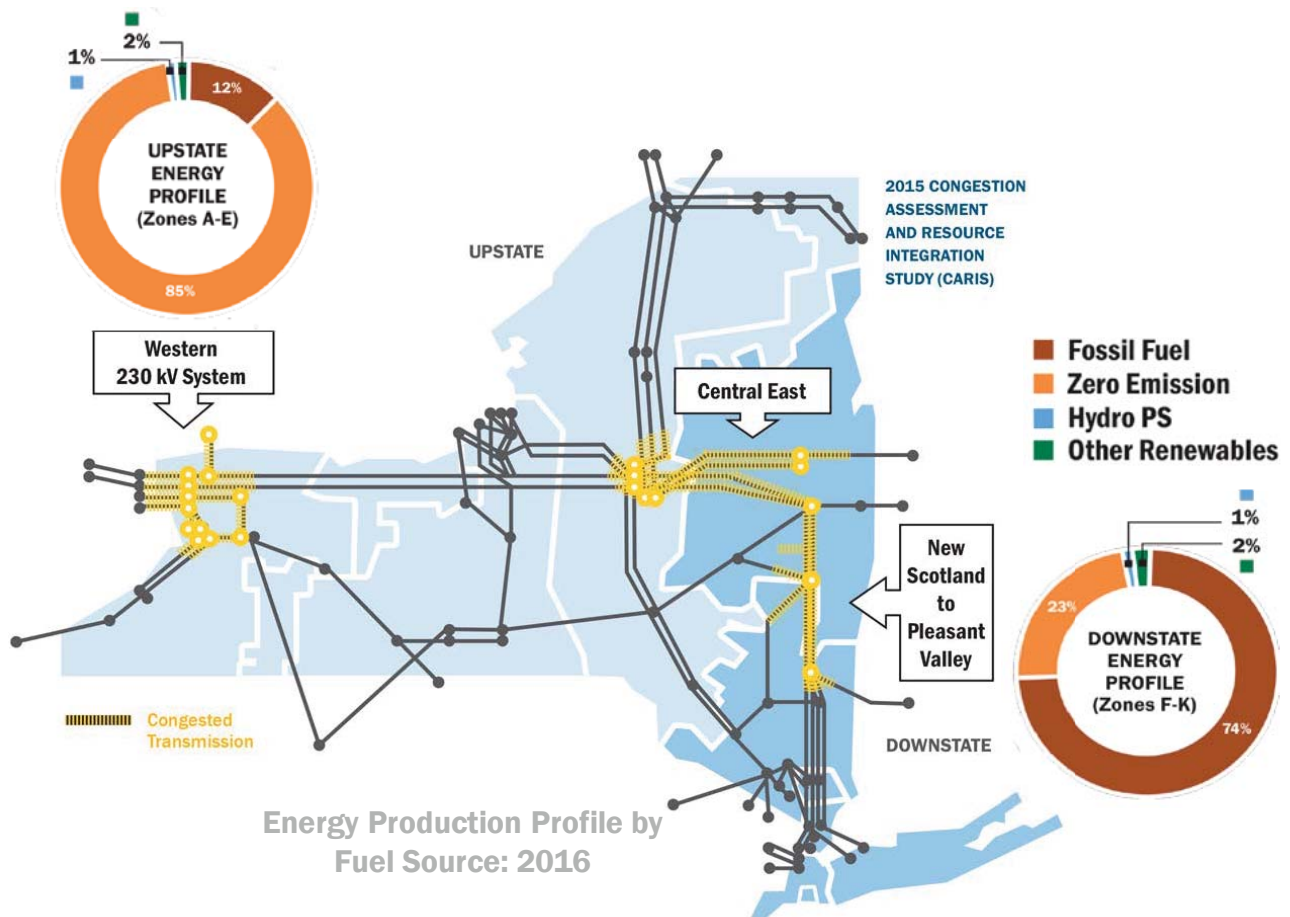
ENERGY

CHP Project” award from the Northeast Clean Heat and Power Initiative in 2014 and helped the Albany Medical Center earn a High Performance Building Plaque from NYSERDA.

Gas and electric service are provided throughout the county by National Grid and Central Hudson Gas and Electric. Central Hudson primarily operates in Rensselaerville, Westerlo, and Coeymans while National Grid serves the rest of the county.

Development Limitations

Albany County is located along one of the most congested transmission corridors in New York State between the Mohawk Valley and the lower Hudson Valley. This bottleneck is caused by high draw from New York City, which sometimes exceeds the capacity of the upstate transmission facilities, resulting in excess demand being met by more expensive and less efficient sources. While this bottleneck primarily affects downstate energy customers, addressing congestion would allow upstate power producers greater access to the downstate market and would lower energy costs for consumers.



New York State Transmission System. According to “The State of Storage” report developed by the New York Independent System Operator (NYISO) in December 2017, transmission of electricity from generators to consumers is constrained in the Hudson Valley (including Albany county), New York City, and Long Island due to congested transmission lines (Graphic Credit: NYISO).

EXISTING CONDITIONS: **NON-RENEWABLES**

ENERGY

The State recently attempted to mitigate the congestion by upgrading the lines between the Marcy substation, located just outside of Utica, and the substation in New Scotland. This project was completed in 2016 and provided an additional 440 MW of capacity.

In addition to capacity, the age of the county's transmission lines is also of some concern. According to the NYS Transmission Assessment and Reliability Study, as of 2012 some of the county's high-voltage transmission lines were within 10 years of reaching their operational lifespans. As lines age, they are more susceptible to failure and require more outage time for maintenance, so the NYISO recommends replacing them instead of continually maintaining them.

In terms of generation, the non-renewable power infrastructure is relatively robust in Albany County and does not present any immediate impediments to development. In total, over 1,300 MW of electrical power can be produced by the county's non-renewable plants. This amount is sufficient to power 1,300,000 homes. For comparison, approximately 310,000 people live in Albany County. Thus, energy production capacity from non-renewable sources alone is sufficient to address the county's needs.

Opportunities

In order to increase reliability of the county's energy transmission system and transition towards emissions-free, renewable energy sources, the following opportunities were identified:

- Work with energy utilities and the NYISO to inventory the county's transmission lines and poles and develop an asset management plan to prioritize maintenance activities and proactively identify infrastructure that needs to be replaced (i.e., near the end of its operational lifespan).
- Encourage and incentivize renewable energy generation and distribution. Renewable energy sources are often derived from zero-cost resources (e.g., wind, solar), less impactful on the environment, and better for public health than non-renewable sources.



BETHLEHEM ENERGY CENTER

Photo Credit: Andy Arthur

ENERGY

RENEWABLE ENERGY SOURCES

Existing Conditions

Renewable energy is derived from sources that are naturally replenished on a human timescale, such as sunlight, wind, biomass, and hydropower. While renewable energy sources are inexhaustible, they are limited in the amount of energy that can be derived at any given time. There are nine energy facilities in Albany County that utilize renewable sources:

- Capital Region Community Solar Garden (5.5 MW capacity)
- Owens Corning solar farm (2.7 MW capacity)
- Bethlehem East solar farm (2.4 MW capacity)
- Colonie LFGTE biomass facility (6.4 MW capacity)
- MM Albany Energy biomass facility (5.9 MW capacity)
- School Street Hydroelectric Power Plant (42 MW capacity)
- Crescent Hydroelectric Power Plan (11.6 MW capacity)
- Green Island Hydroelectric Station (6 MW capacity)
- Normanskill Hydro Project (1.2 MW capacity)

Solar

Combined, the three solar farms in Albany County can generate up to 8.6 MW of electrical energy. The Owens Corning solar farm, established in 2013, is located in Bethlehem and is one of the State's largest industrial solar arrays. The solar array is 9-acres in size and was built on a former corn field adjacent to the Owens Corning plant; the solar array directly supplies the plant and provides approximately 6% of the plant's electricity needs.

The Bethlehem East solar farm is also located in the Town of Bethlehem and was established in 2016 on a former clay mine. Electrical energy derived from this solar facility directly supplies town facilities.

In April 2019, the Capital Region Community Solar Garden came online. This solar garden is the County's first community solar project and is one of the largest community solar projects in the State. The facility is located in the Village of Altamont and generates up to 5.5 MW of electricity.

Solarize Albany is a regional community-based initiative supporting the implementation of rooftop solar and community solar throughout the Capital Region, with the objectives of lowering the cost of solar power and transforming the local solar marketplace. Albany County has been a fundamental partner in supporting Solarize Albany, and has helped the initiative expand beyond the county to serve the entire Capital Region.



COMMUNITY SOLAR

Community solar programs significantly expand access to renewable energy generation; individuals can support solar energy production and save money on their monthly electricity bill without having to install solar panels on their own property. Instead, community solar projects are installed in a sunny location within a community, and any utility customer in the surrounding area (e.g., a National Grid customer) is able to subscribe to a community solar plan (short-term option with little to no upfront capital needed) or purchase a share of the community solar project (larger investment with greater potential savings). Community solar members continue to receive electricity from their local utility as well as solar credits that lower monthly electricity bills.



Solar Arrays in Albany County. The top image shows the Capital Region Community Solar Garden in Altamont, which came online in April 2019. The bottom image displays the Bethlehem East solar farm, which was developed on a former clay mine site and supplies town facilities with electricity. Photo credits: Solar Industry Magazine (top image); NextEra Energy Resources (bottom image).

EXISTING CONDITIONS: RENEWABLES

ENERGY

Biomass

Combined, the two biomass facilities located in Albany County can generate up to 12.3 MW of electrical energy. The Colonie LFGTE (landfill gas to energy) biomass facility is located at the Town of Colonie's landfill in the City of Cohoes where landfill gas (predominantly methane and carbon dioxide) - a natural by-product of decomposition - is captured and converted into electricity. The MM Albany Energy biomass facility is located at the City of Albany's landfill on Rapp Road. Similar to the Colonie LFGTE, this facility collects and converts landfill gases into electrical energy. The City of Albany's Municipal Solid Waste (MSW) permit expires in June 2019 and the NYS DEC has not permitted any expansions of the facility; the City of Albany expects to close this landfill between 2022 and 2026. The NYS DEC recently approved an expansion of the Town of Colonie's landfill, enabling the landfill to operate through April 2028.

Hydropower

Combined, the four hydropower facilities in Albany County can generate up to 60.8 MW of electrical energy. The School Street Hydroelectric Power Plant was built in 1915 and is located in the City of Cohoes on the Mohawk River at the Cohoes Falls. This facility is owned by Brookfield Renewable Power and electricity produced by the School Street hydroelectric turbines flows directly into the State's electrical grid.

The Crescent Hydroelectric Power Plant is owned by the New York Power Authority (NYPA) and is located in the Town of Colonie on the Mohawk River. In 2017, NYPA completed significant upgrades at the Crescent Power Plant, including an overhaul of the facility's hydropower turbines and its plant control equipment.



School Street Hydroelectric Power Plant. Located on the scenic Cohoes Falls along the Mohawk River, this facility has a nameplate capacity of 42 MW, and all electricity generated flows into the State's electrical grid. Photo credit: Wikimedia.

EXISTING CONDITIONS: RENEWABLES

ENERGY

The Green Island Hydroelectric Station is located in the Village of Green Island on the Hudson River at the west end of the Federal Dam. It is owned and operated by the Green Island Power Authority (GIPA), and all electricity generated is sold into the state's wholesale market. GIPA has plans to significantly expand the capacity of the Green Island plant; however, this \$100 million expansion project has not yet been implemented.

The Normanskill Hydro Project is located in the Town of Guilderland at a dam on the Normanskill River. This dam creates the Watervliet Reservoir, which provides a source of drinking water for the City of Watervliet and the Town of Guilderland. The hydro power facility is owned and operated by the City of Watervliet, and electricity generated from this facility is used to pump water from the reservoir to the City of Watervliet's filtration plant. Excess power is sold to Niagara Mohawk. The City initiated the relicensing of this facility with the Federal Energy Regulatory Commission (FERC) in February 2017, as its current license will expire in February 2022.

Wind

Currently there are no existing or proposed large-scale wind farms in Albany County. Despite the lack of land-based wind facilities, two ports in Albany County – the Port of Cohoes and the Port of Albany – are poised to play a major role in the offshore wind supply chain. See the Freight Transportation Section on page 16 for more information about the potential role of the County's ports in the offshore wind industry.

State and County Renewable Energy Initiatives

New York's Clean Energy Standard (CDS) establishes an ambitious clean energy goal, requiring the state to obtain 50% of its electricity from renewable energy sources by 2030, reduce greenhouse gas emission by 40% by 2030 and by 80% by 2050. Recently, Governor Cuomo has called for the CES to be expanded by requiring the state to obtain 70% of its electricity from renewable sources by 2030. In an effort to achieve these goals, several State programs provide funding assistance for the development of renewable energy sources, many of which are administered by NYSERDA (e.g., NY-Sun, Clean Energy Fund, Green Bank).

In May 2017, Albany County became the first community in the Capital Region to earn the Clean Energy Community (CEC) designation. This designation recognizes the County's leadership in reducing energy use and supporting the development of clean energy. The four high impact actions that the County implemented to achieve its CEC designation include:

- Adoption of benchmark policies to track energy usage in over 40 County-owned or occupied buildings
- Participation in the community-based Solarize campaign to reduce solar project costs in Albany County
- Establishment of the Energize NY Finance Program that enables long-term clean energy financing for energy efficiency and renewable energy projects at commercial and not-for-profit buildings
- Installation of six electric vehicle charging stations at the Albany County Airport

Development Limitations

Solar and wind are intermittent resources that vary in time and magnitude and must be paired with energy storage resources (e.g., batteries, pumped storage) to achieve reliable and efficient energy supply to the electric grid. In general, wind power production typically peaks at night and solar power typically peaks around midday. Electricity demand, which varies by season, typically peaks around 4PM. This peak in electricity demand aligns well with solar production in the summer, but is not aligned with wind production during any season or solar production in the winter.

Furthermore, large solar (multiple arrays) and wind (multiple rows of turbines) installations require large swaths of open space. In Albany County, these locations are typically dedicated to agricultural or natural resource conservation uses. To avoid the displacement of agriculture and the clearing of forested land, opportunities to install solar and wind facilities on underutilized spaces (e.g., brownfields) and at smaller scales (e.g., rooftops) should be pursued.

EXISTING CONDITIONS: RENEWABLES

ENERGY

Over 80% of the State's high voltage transmission lines are over 30 years old and require major upgrades. Given Albany County's location in the congested Hudson Valley, existing transmission infrastructure is likely insufficient to deliver renewable energy generated in Albany County to the large load centers of New York City and Long Island without support from energy storage resources.

Hydroelectric generation is more reliable than solar and wind energy resources and has a long history of being integrated into the state's electrical grid. In fact, hydroelectric plants meet approximately 17% of the State's total electrical energy demand. However, the

construction of new, large-scale hydroelectric facilities is unlikely, as the construction of dams significantly alters waterways and is extremely resource-intensive. Instead, the future development of high-efficiency, small-scale hydroelectric technologies is much more likely.

Landfill biogas collection and conversion to electricity is currently inefficient at both the Albany and Colonie landfills. The Albany landfill is the third-largest source of methane emissions in the state, while the Colonie landfill is ranked 20th on the statewide methane emissions list. Methane is the most potent greenhouse gas and is a by-product of organic decomposition.

PERMITTING SIMPLIFIED FOR SOLAR ENERGY PROJECTS

Recent changes to the New York State Environmental Quality Review Act (SEQRA) regulations significantly reduce the environmental review requirements for solar projects. Specifically, the installation of solar arrays sized 25-acres or less on the following sites is now a Type II action (not subject to environmental review):

- Closed landfills
- Brownfield sites
- Inactive hazardous waste disposal sites
- Disturbed areas at publicly-owned wastewater treatment facilities
- Disturbed areas at sites zoned for industrial use
- Parking lots or parking garages
- Existing structures not listed or eligible for listing on the National or State Register of Historic Places and not located in a district listed on the National or State Register of Historic Places

Opportunities

In order to facilitate the development of renewable energy sources, increase the reliability and resiliency of the county's electrical system, and decrease greenhouse gas emissions, the following opportunities were identified for Albany County:

- Conduct an analysis to identify suitable, potential sites for the future development of solar and wind farms in order to guide the siting of future renewable energy development, ensure compatibility with existing land uses, such as agriculture and natural resource conservation, and establish clear expectations for developers.
- Partner with National Grid, NYSERDA, and NYPA to explore and pilot energy storage resources that are currently in the research and development phase to support the reliable integration of renewable energy resources into the electric grid.
- Collaborate with the Albany County Water Purification District and municipal water supply systems to pilot high-efficiency, small-scale hydroelectric technologies to generate power for County-owned and/or operated facilities.

EXISTING CONDITIONS: RENEWABLES

ENERGY

- Partner with municipal and State agencies to test and implement new gas collection systems at the Albany and Colonie landfills to improve methane capture and conversion to electricity and to reduce emissions.
- Implement a county-wide organic waste diversion program to eliminate organic waste from landfills by establishing a large-scale composting program that converts organic waste into a valuable product and alleviates pressure on the County's space-constrained landfills.
- Collaborate with State, municipal, and utility partners to identify opportunities for the establishment of microgrids powered by renewable energy sources (paired with energy storage resources) to increase the resiliency of the County's electrical grid.



City of Albany Landfill is a Major Source of Methane Emissions. Despite the existence of systems to collect and convert landfill biogas into electricity, the Albany Landfill is the state's third largest producer of methane gas. The landfill is nearly at capacity, and the landfill is expected to close between 2022 and 2026. Photo credit: Times Union.

EXISTING CONDITIONS

TELECOMMUNICATIONS

INTRODUCTION

Reliable access to telecommunications services – meaning long distance and data telephone services as well as high speed internet connections (i.e., broadband) – is critical to the daily activities of residents, businesses, and visitors. Telecommunication services provide the technical foundation for communication, data sharing, and information access. Every sector and industry relies on telecommunications to some degree – from a simple phone call or email to navigation services to running a complex global enterprise. In particular, high-speed broadband is a powerful economic development tool that supports business operations, job creation, education, civic engagement, and bridges the digital divide for low-income communities.

This section addresses the following topics:

- Existing telecommunication service conditions and providers
- Access to broadband services
- Development limitations
- Opportunities

Existing Conditions

Providers

The primary providers of cellular service in Albany County include Verizon, Sprint, AT&T, and T Mobile, with Verizon and AT&T providing the most comprehensive coverage countywide.

The primary providers of broadband internet services in Albany County are Spectrum, Verizon, and Verizon Fios. The sole provider of broadband internet in urban areas is Spectrum. This lack of competition in urban areas contributes to affordability and access issues, particularly in low-income communities.

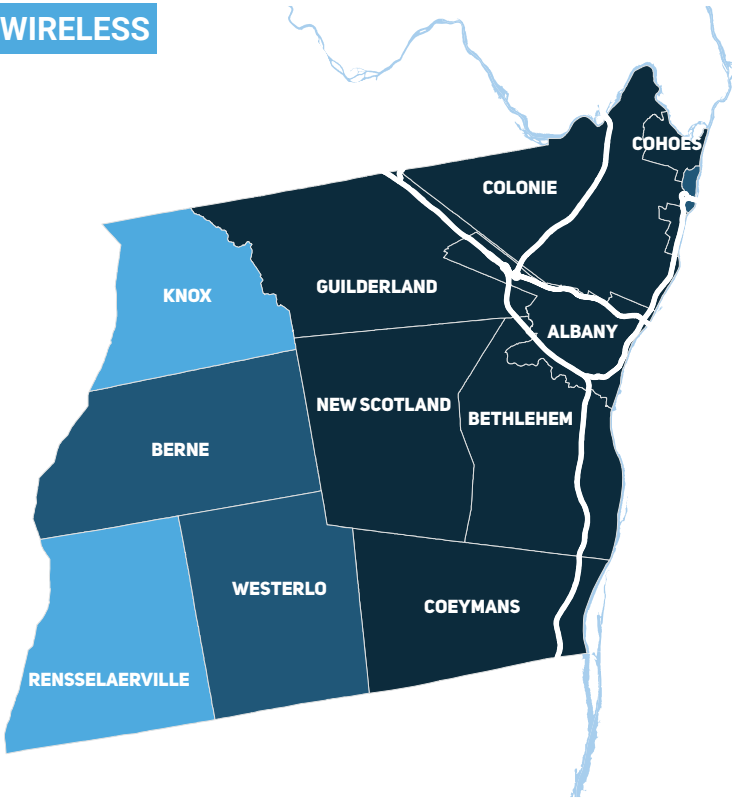
There are also several other local providers offering fiber optic, DSL, and fixed wireless services, however, their coverage is generally limited across the county. For example, FirstLight Fiber is headquartered in downtown Albany and has one of the largest fiber optic networks in the northeastern United States, with a dense fiber footprint in Albany County. FirstLight Fiber provides enterprise and carrier customers with high speed data, Internet, and cloud services.

Broadband Access

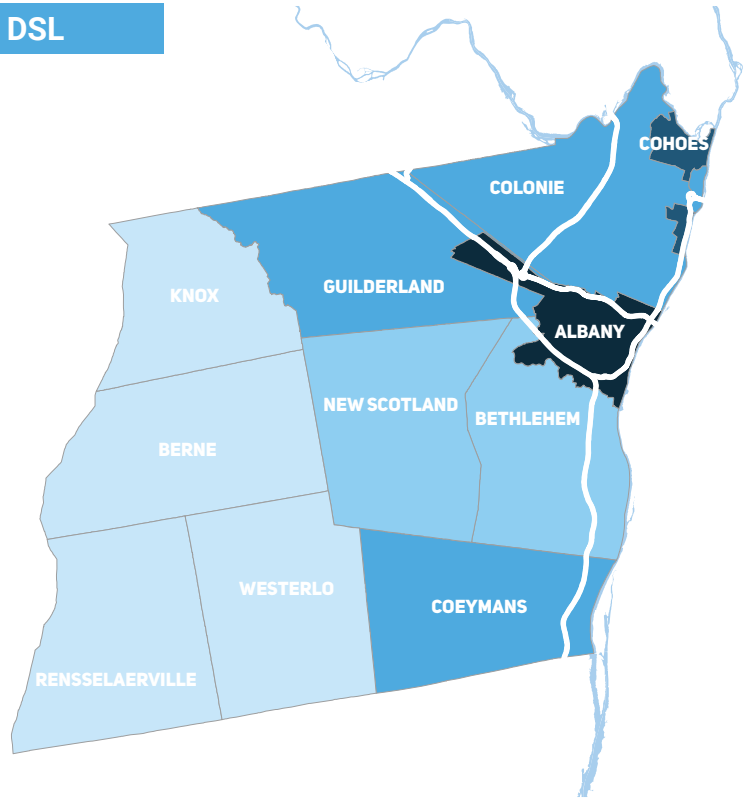
Urban and suburban areas generally experience the greatest access to a diversity of broadband internet options and service coverage, while broadband services in rural areas are limited. Wireless (fixed or mobile) and cable broadband are the most widely available internet services in Albany County, and with the exception of Westerlo, a majority of housing units in rural towns have access to these services. DSL broadband is most accessible in urban and suburban areas, but is not a viable option for most rural residents. Access to high speed fiber optic internet services are limited countywide; in most towns, less than 50% of housing units have access to fiber internet.

Despite the relatively high percentage of households with access to wireless, DSL, and cable services in the City of Albany, a “Broadband Assessment and Feasibility Study” conducted in 2017 indicates that many of the City’s residents (approximately 35%) do not have access to high-

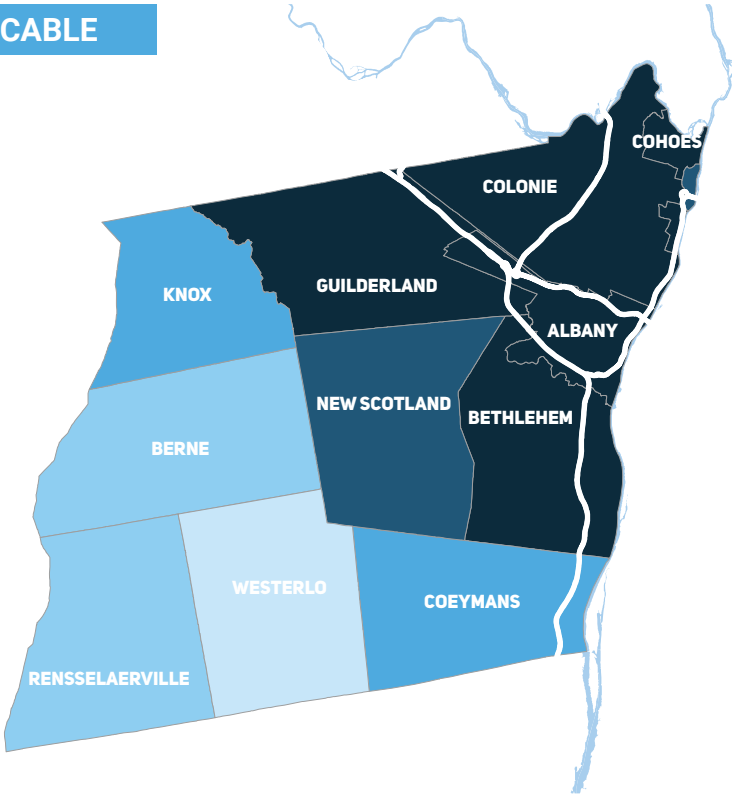
WIRELESS



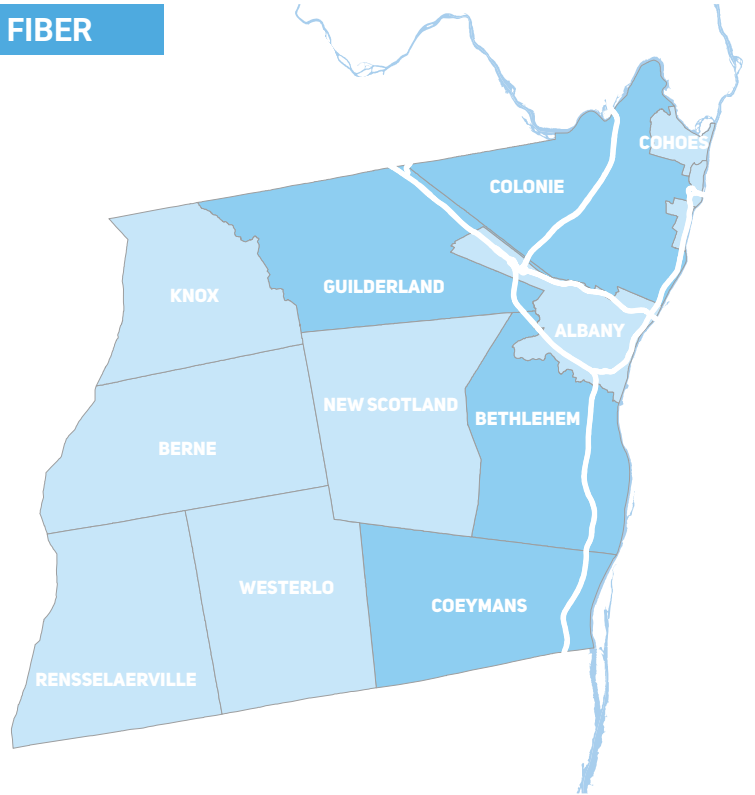
DSL



CABLE

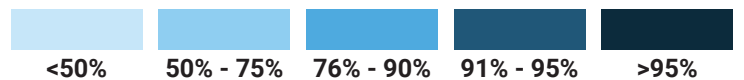


FIBER



BROADBAND ACCESS

PERCENT OF HOUSING UNITS WITH ACCESS



TELECOMMUNICATIONS

speed internet (25-100 mbps), and this lack of access is particularly prevalent in low-income communities. Affordability is the primary reason such a high percentage of City residents do not have high speed internet access in their homes.

In rural areas, access to broadband internet services is particularly limited for county farms, according to the Albany County Agriculture and Farmland Protection Plan Update (2018). Approximately 25% of the county's farms do not have access to internet service, and those farms that do have internet service consistently have experience issues with quality and reliability.

Development Limitations

Despite the presence of broadband infrastructure in the City of Albany, a high percentage of City residents do not have access to high-speed internet, largely due to the high cost of these services. Unfortunately, only one broadband provider serves City residents (Spectrum), making it impossible to access more affordable options. The high cost of high-speed internet access disproportionately affects low-income communities, and exacerbates issues related to educational attainment, poverty, and unemployment.

Many rural households do not have reliable, high-quality access to broadband services. This lack of broadband access in rural areas severely limits opportunities for telecommuting and is challenging for farmers, particularly those who have electronic data interchange needs for managing client accounts.

Access to fiber optic broadband services is generally low countywide. Fiber optic is the fastest (and most expensive) internet technology currently available and is critical to attracting tech start-ups and fueling economic growth.

Opportunities

Reliable access to high speed internet and cellular phone service are fundamental to economic development and public safety. Several opportunities exist to expand broadband access in Albany County, including:

- Apply for State grants through the New NY Broadband Program to enhance broadband access countywide, with a particular emphasis on low-income urban communities and county farms.
- Pursue public-private partnerships with technology companies to install fiber optic cable in areas targeted for economic growth.
- Pursue the development of an alternative high-speed broadband network for the City of Albany to increase competition, affordability, and access.
- Leverage the rapidly growing cellular broadband network (4G and 5G LTE) to build-out high-speed community broadband services. 5G LTE infrastructure, which promises better coverage and higher bandwidth (100+ Mbps) than 4G, is currently being deployed throughout the City of Albany.
- Coordinate with municipalities to evaluate the feasibility of establishing high speed, municipal-owned internet networks to provide free or affordable internet service, particularly in underserved areas or areas well-positioned for economic growth.

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02

LAND USE:

EXISTING CONDITIONS + OPPORTUNITIES

EXISTING CONDITIONS

LAND USE

INTRODUCTION

Understanding the existing mix of land uses and how these land uses are distributed in relation to major infrastructure systems (e.g., railroads, roadways, transit, public utilities) are important first steps in identifying future opportunities and priority areas for new development. Albany County is comprised of a diversity of land uses, with residential uses comprising a majority of the county's area (60%). Unlike residential uses, which are relatively evenly distributed throughout the county, commercial and industrial uses typically cluster along major transportation corridors, such as interstate systems and rail lines. The distribution of recreation and community service uses generally coincide with more densely populated areas, while conservation and agricultural uses are typically concentrated where infrastructure systems are limited and population density is low.

This section describes the characteristics and distribution of the following land uses across Albany County:

- Agricultural
- Residential
- Commercial
- Industrial
- Public Service
- Recreation + Community Service
- Conservation
- Vacant

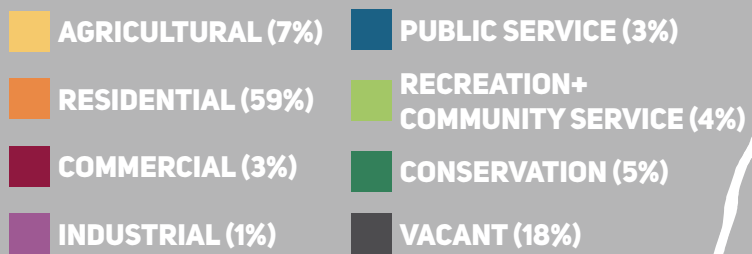
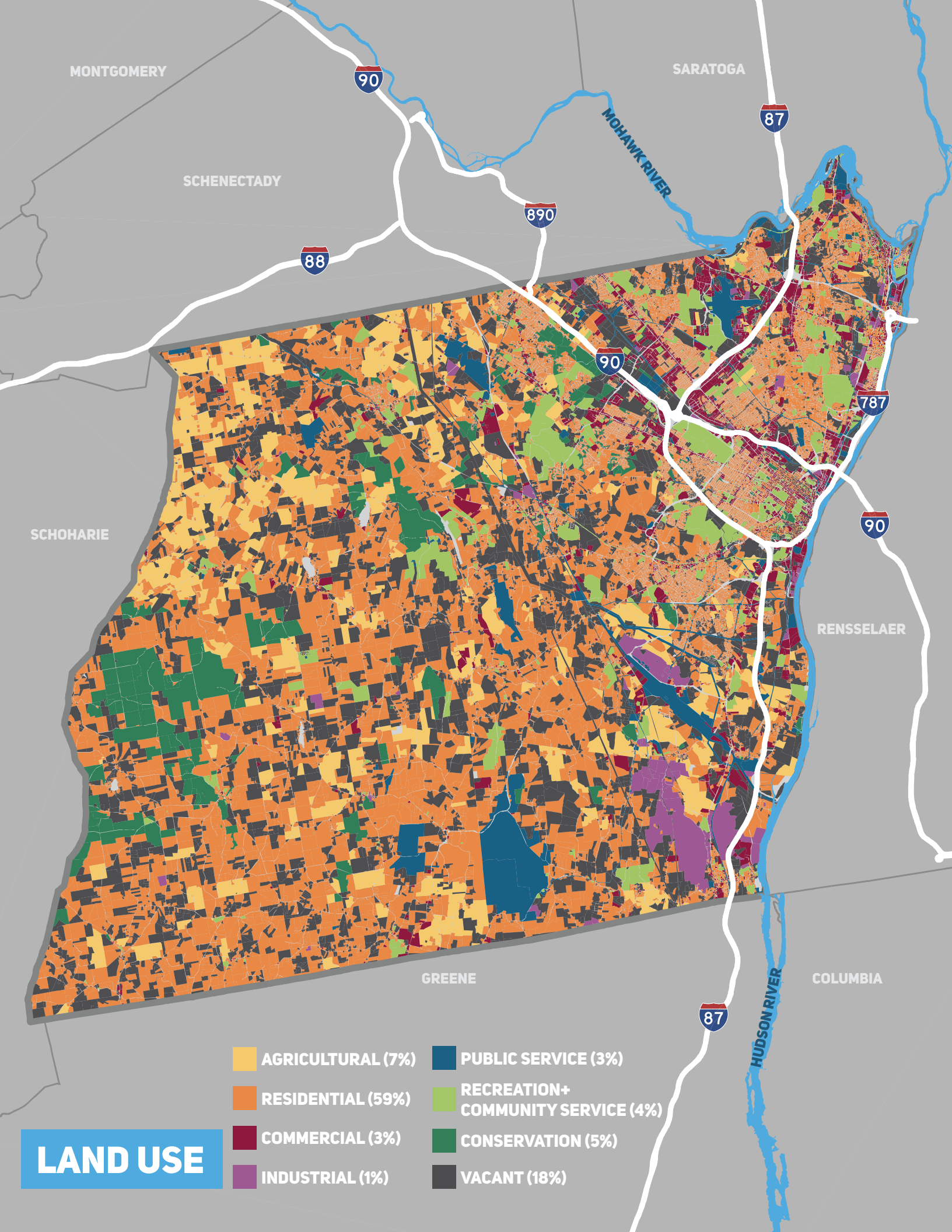
AGRICULTURAL

Agricultural uses comprise approximately 7% of the total area in Albany County and are concentrated in the towns of Guilderland, Knox, Berne, Westerlo, Rensselaerville, New Scotland, Coeymans, and Bethlehem. Agricultural uses are sparse or completely absent in the Town of Colonie and the Cities of Albany, Green Island, Cohoes, and Watervliet.

Nearly 500 farms are in operation in Albany County. Most farms in the county are diversified and areas of specialization include: beef cattle, oilseed and grain, hay production, sheep and goats, poultry and eggs, vegetables and melons, and floriculture. In 2012, the market value of farm products sold in Albany County totaled \$46 million.

Approximately 15% of the land in Albany County is located in an agricultural district, which is more than double the land area currently classified as an agricultural use. Agricultural districts represent lands that are protected by the New York State Agricultural District Law, which was enacted in 1971 to, "protect and promote the availability of land for farming purposes." These protections include landowner incentives that are designed to prevent the conversion of farmland to non-agricultural uses. Incentives include partial real property tax relief, protections against overly restrictive local laws, access to government funded acquisition or construction projects, and protections against private nuisance suits involving agricultural practices. The law also grants counties the authority to create, modify, and approve agricultural districts (the approval process also requires certification from the Commissioner of Agriculture and Markets that the proposed or amended district meets the intent of the law). While not all lands within an agricultural district are currently classified as an active agricultural land use (many are classified as residential or vacant land uses), all agricultural districts overlap with priority farmland flagged for protection by Albany County.

In 2018, Albany County updated its Agriculture and Farmland Protection Plan. This Plan was developed to advance the following vision, "Protect and enhance the agricultural industry in Albany County in a manner that



LAND USE

EXISTING CONDITIONS

LAND USE

protects the farmers' ability to operate profitably while providing for community character, natural resource protection, and open-space needs." A major component of the updated plan was the development of an agricultural economic development plan, which summarizes current challenges that farmers face in Albany County and recommends solutions to overcome these challenges. These challenges include:

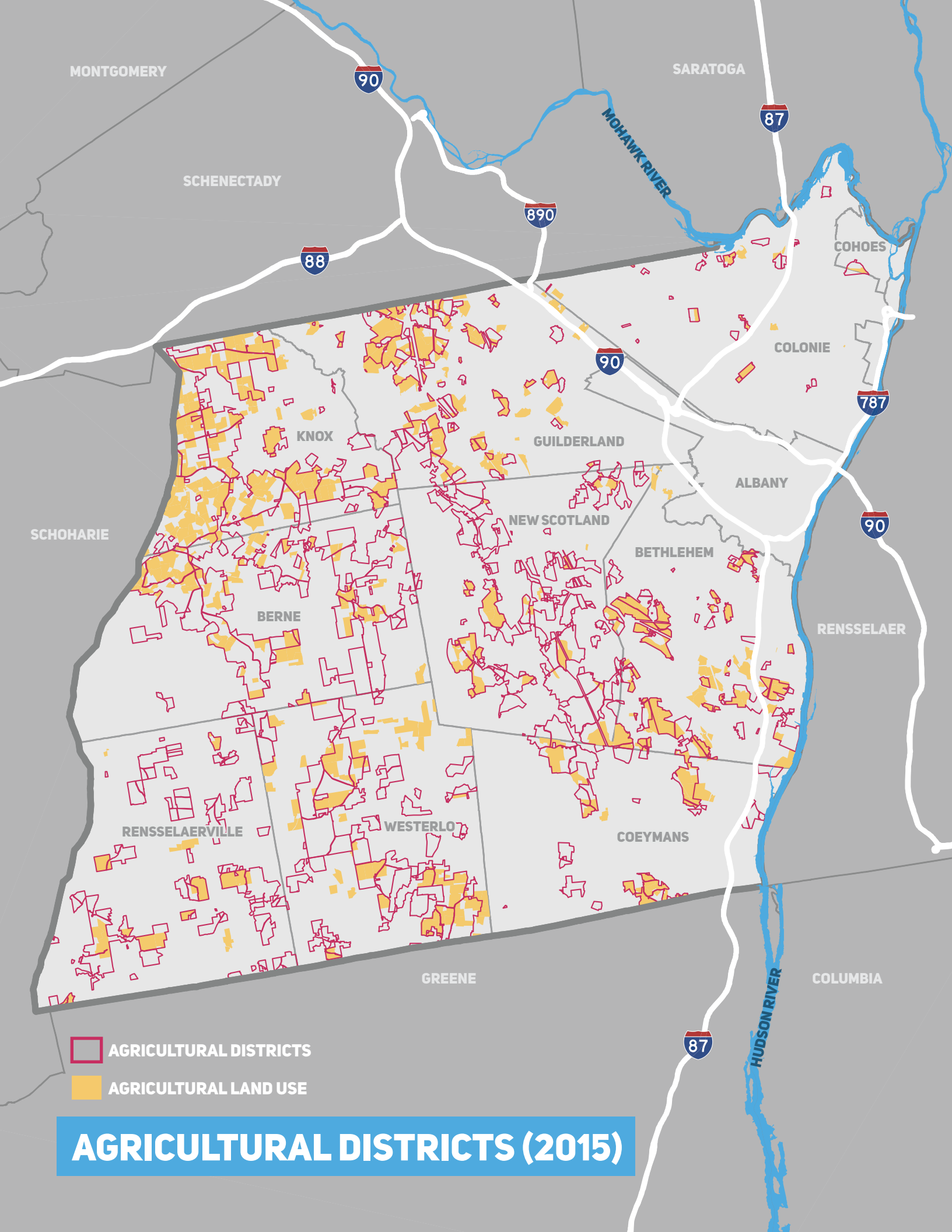
- **High cost of doing business.** Farmers highlighted the following issues as economic challenges: high property tax burdens relative to neighboring Mid-Atlantic states, high costs of maintenance and repair due to the cost of locally inventoried goods and third-party shipping delays, and efficiencies of scale.

- **Competition for land resources.** The expansion of existing farms and the establishment of new farms are impaired by the lack of large, contiguous swaths of high productivity soils. Further, the land value in Albany County has been steadily increasing due to pressures generated by suburban sprawl and competition between farmers for access to high quality parcels of land. According to the Agriculture and Farmland Protection Plan, farmland currently costs approximately \$3,100 per acre, which is nearly 20% higher than statewide land values.
- **Market development.** Farmers selling directly to retail customers find it difficult to compete with convenience-oriented shopping options that are available 24/7. In wholesale markets, farmers are challenged by increased demand for value-added products, merchandising, grower contracts, and new and emerging food safety requirements in the global and national supply chains.
- **Infrastructure development.** As discussed in Section 1 of this report, farmers are challenged by rural road conditions and a lack of reliable access to broadband internet services.
- **Beginning farmer support.** Nearly 92% of farm operators are 45 years old or older. There is a clear need to attract and support new farmers to ensure agriculture has a future in the county.
- **Access to economic and business development resources.** Farmers require local access to specialized training to ensure they stay up-to-date with technological advances. Cornell Cooperative Extension, located in Voorheesville, provides several critical services to farmers, but does not have the capacity to provide "wrap-around" services such as product development, feasibility analysis, market research, brand development, and intellectual property development.

PRESERVING WORKING LANDSCAPES

The Mohawk Hudson Land Conservancy (MHLC) utilizes conservation easements to proactively preserve historic and productive farmlands in the Capital Region. This legal agreement between MHLC and the land owner conserves farmland in perpetuity by limiting future development and encouraging continued agricultural uses on the land.

In particular, Rensselaerville, which is characterized by pastoral landscapes and productive forests, has been identified by the MHLC as a critical link to the Catskill Mountains and the Capital Region. The MHLC has prioritized the preservation of healthy working landscapes in the the Town of Rensselaerville to ensure local food production is accessible to future generations and that the bucolic character of the area is maintained.



-  AGRICULTURAL DISTRICTS
-  AGRICULTURAL LAND USE

AGRICULTURAL DISTRICTS (2015)

EXISTING CONDITIONS

LAND USE

In response to these challenges, the Agriculture and Farmland Protection Plan recommended a suite of solutions focused on transforming the local and regional agricultural markets, improving entrepreneurial services, and updating critical infrastructure. Albany County was identified as a potential lead agency for the following recommendations:

- Enhance craft beverage supply-chain development
- Create a forest product innovation plan
- Support the study of specialty processing opportunities
- Create an electronic exchange system for production assets and farm services
- Enhance the Hudson Valley Agribusiness Development Corporation membership
- Support the creation of a regional beginning farmer mentor-protégé program that extends reach of existing programs
- Improve broadband access
- Encourage greater use of community scale alternative fuels in combined heat and power projects



Photo Credit: MHLC



Albany County's Agricultural Landscapes. **Top left:** Farmland in the Town of Rensselaer preserved by a conservation easement with the Mohawk Hudson Land Conservancy (MHLC) and the Open Space Institute (photo credit: MHLC). **Top right:** Eight Mile Creek Farm, a diverse organic farm, in the Town of Westerlo (photo credit: USDA, NRCS NY). **Bottom:** Cattle at a family-owned farm in the Town of Berne (photo credit: AtEase Acres Farm).

EXISTING CONDITIONS

LAND USE

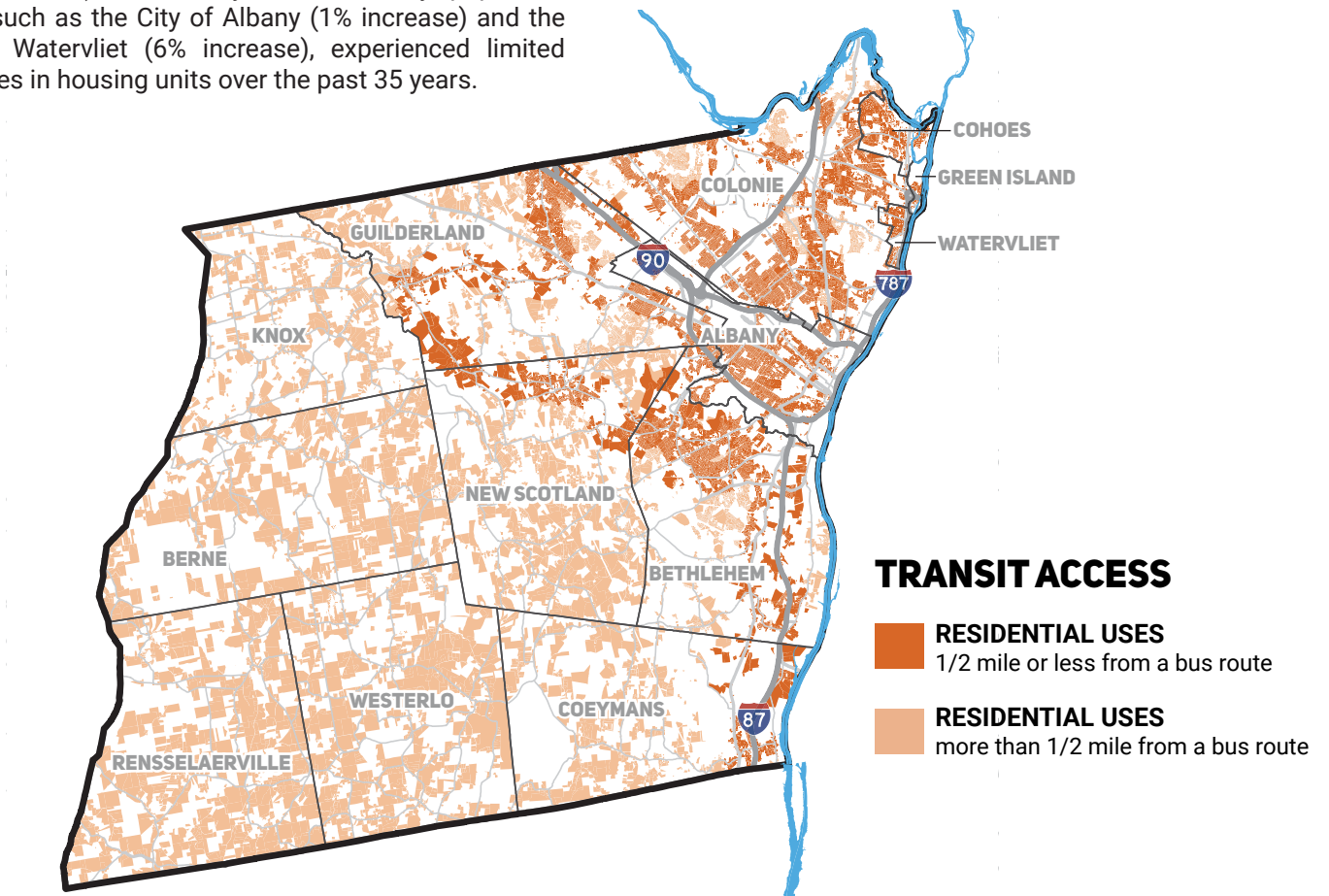
RESIDENTIAL

Residential uses comprise approximately 60% of the total land area in Albany County and are relatively evenly distributed throughout the county. Single family homes are the dominant residential use in the towns of Berne, Bethlehem, Coeymans, Colonie, Guilderland, Knox, New Scotland, Rensselaerville, and Westerlo, while the cities of Albany, Cohoes, and Watervliet and the Village of Green Island offer more diverse housing options (e.g. single family, two-family, multifamily).

Between 1980 and 2015, several municipalities experienced substantial increases in the construction of new housing units, including: Bethlehem (66% increase), Guilderland (57% increase), Berne (41% increase), Knox (34% increase), Colonie (33% increase), and Westerlo (33% increase). Conversely, more densely populated areas, such as the City of Albany (1% increase) and the City of Watervliet (6% increase), experienced limited increases in housing units over the past 35 years.

From 2005 to 2015, several municipalities built new roads to provide access to residential developments. In particular, the Town of Colonie built nearly 14 miles of new roads over this 10-year period; however, only 18% of these new roads included sidewalks, despite the residential uses that the new roads served.

Nearly 80% of all residential parcels are located within one-half mile of a bus route, indicating that a majority of residences in the county have access to public transportation. This is particularly true for residential uses in urban areas and oriented along major roadways. Large lot residential parcels and rural residences generally do not have access to public transportation services.



TOTAL POPULATION			HOUSING UNITS			ROAD INFRASTRUCTURE	
2010	2050 (PROJECTED)	% CHANGE	1980	2015	% CHANGE	ROADS BUILT (MILES)	SIDEWAYS (MILES)
97,856	98,324	1%	46,209	46,837	1%	3.53	1.2
2,794	2,965	6%	1,173	1,658	41%	0	0.5
33,656	36,899	10%	8,921	14,804	66%	7	2.1
7,418	7,457	1%	3,021	3,338	10%	0.2	0.8
16,168	16,784	4%	7,554	8,881	18%	2.37	1.1
81,591	86,363	6%	26,707	35,592	33%	13.88	4.5
2,620	2,538	-3%	1,132	1,418	25%	0	0.3
35,303	38,403	9%	9,813	15,383	57%	4.24	1.8
2,692	2,851	6%	861	1,152	34%	0	0.4
8,648	8,918	3%	3,047	3,666	20%	0.72	0.9
1,843	1,860	1%	1,060	1,284	21%	0	0.2
10,254	10,271	0.2%	5,017	5,319	6%	0	0.1
3,361	3,550	6%	1,218	1,614	33%	0	0.6

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EXISTING CONDITIONS

LAND USE

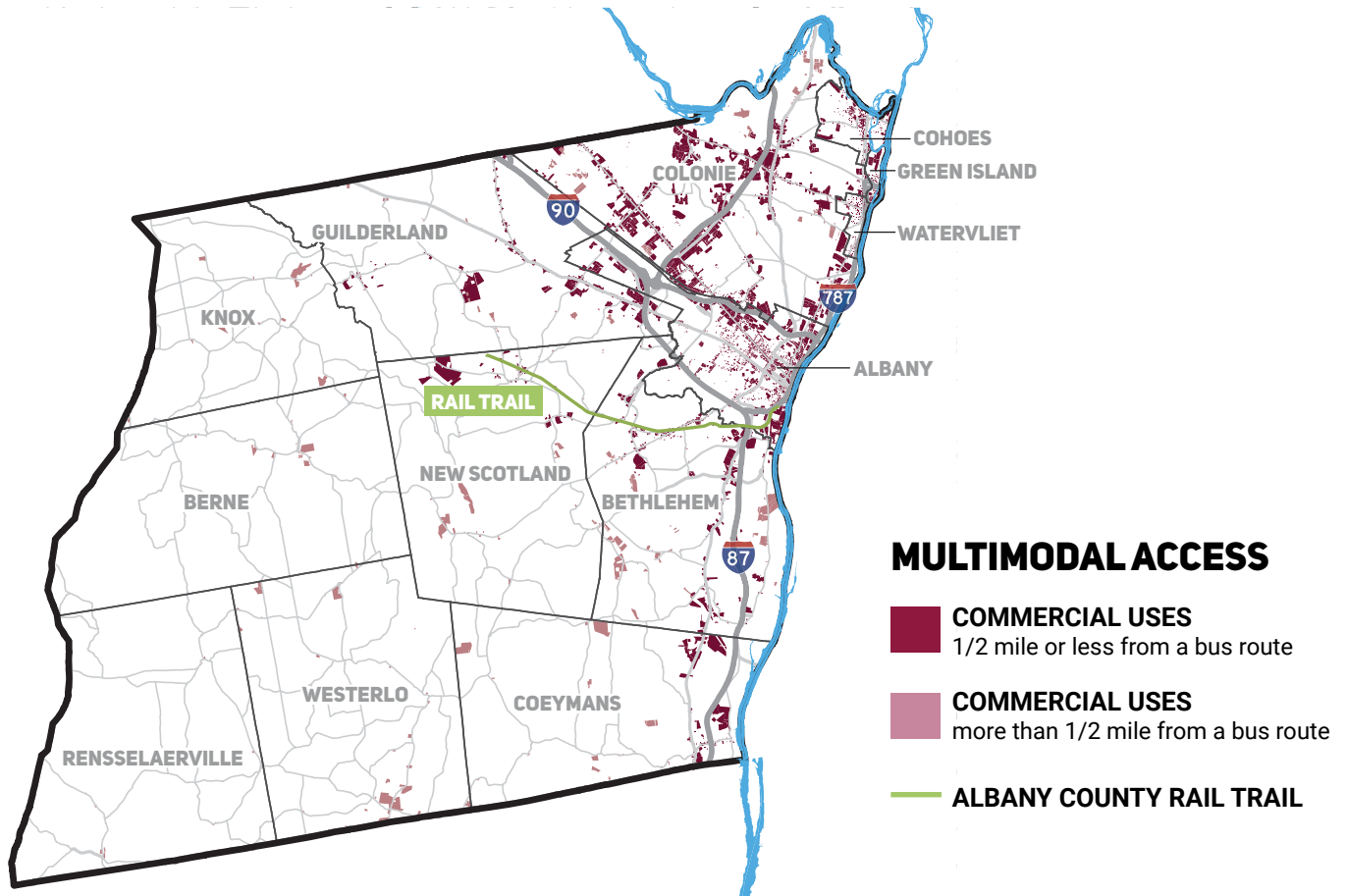
COMMERCIAL

Commercial uses comprise approximately 3% of the total land area in Albany County. These uses are generally clustered in the northeastern portion of the county along major roadways, such as State Route 9W, Central Avenue (State Route 5), Western Avenue (US Route 20), Delaware Avenue (State Route 443), and Wolf Road, and in densely populated areas, such as the City of Albany. Due to this distribution pattern, nearly 95% of the commercial parcels are within one-half mile of a bus route.

Large commercial parcels located in rural areas are often associated with agricultural and tourism-related uses. Examples of these rural commercial uses include Indian

Ladder Farms and Van Wie Farms, LLC in New Scotland and the Shepard Farm, LLC in Westerlo. Specifically, Shepard Farm is a former resort that closed in the 1980s and is currently being considered for redevelopment to provide space for local businesses.

The Albany County Helderberg Rail Trail, which transects the City of Albany and the Towns of Bethlehem and New Scotland, provides multimodal access to suburban and rural commercial uses, particularly those located along State Route 443 and in the hamlets of Delmar and Slingerlands and the Village of Voorheesville.



EXISTING CONDITIONS

LAND USE

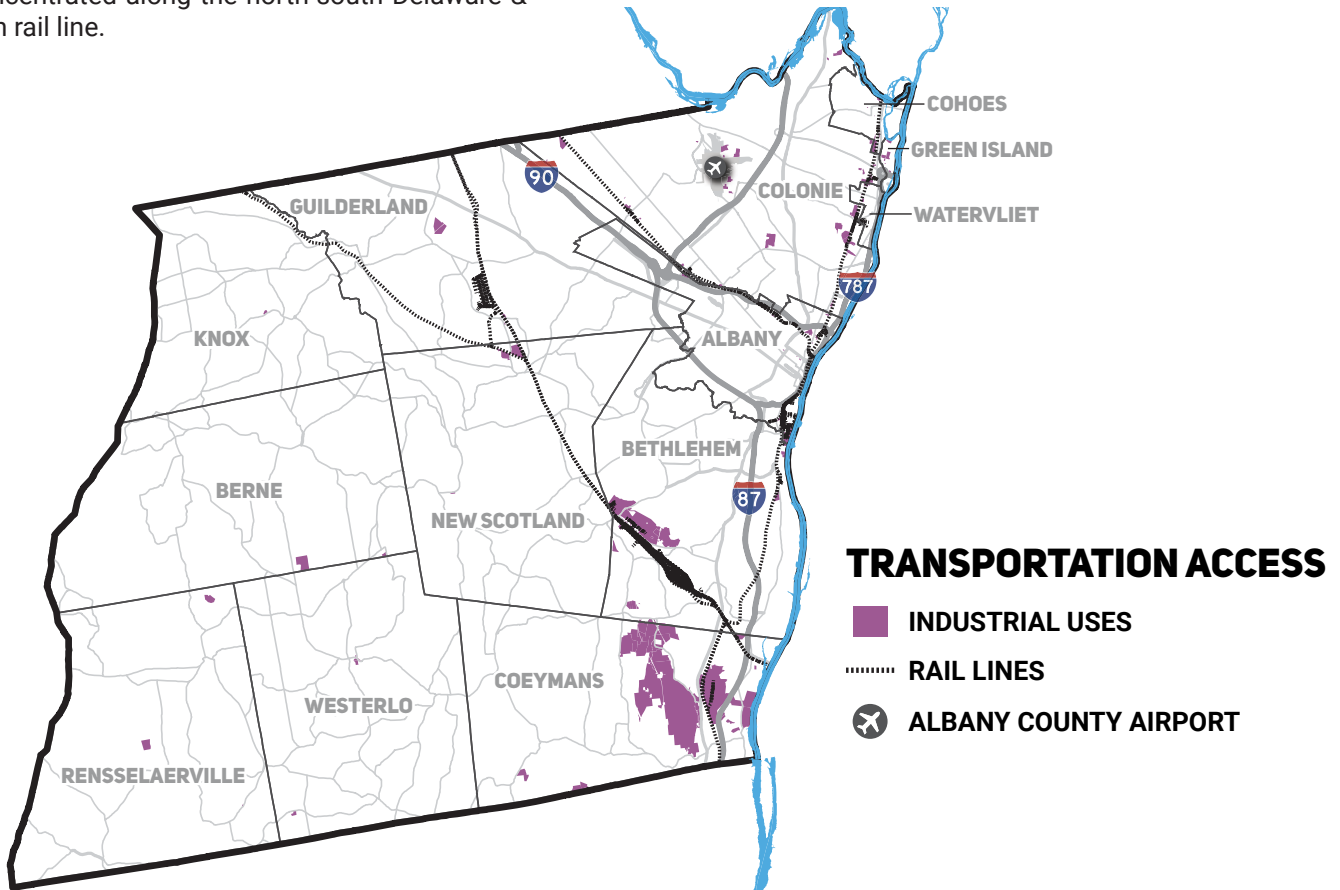
INDUSTRIAL

Industrial uses comprise approximately 1% of the total land area in Albany County and are concentrated in the southeastern portion of the county as well as along major roadways (e.g., I-87 and I-787) and rail lines and adjacent to the Albany County Airport. Industrial activities span a variety of services, including but not limited to: construction, distribution, manufacturing and advanced manufacturing (e.g., chemical, medical, plastics), aggregate and cement production, bottling, Port of Albany activities, and municipal recycling centers.

The distribution and characteristics of industrial uses vary by municipality:

- In the City of Albany are largely confined to the east-west CSX rail line and the Port of Albany.
- In the Cities of Watervliet and Cohoes, industrial uses are concentrated along the north-south Delaware & Hudson rail line.

- Industrial uses in the Town of Colonie cluster around the airport and along the CSX and Delaware & Hudson rail lines.
- The Town of Bethlehem has several smaller industrial uses located along the Delaware & Hudson rail line and a large industrial complex consisting of GE Noryl (plastics manufacturing) and Owens Corning (insulation systems manufacturing) located adjacent to the CSX Selkirk Rail Yard.
- The Town of Coeymans has several large-scale manufacturing industries located along the CSX rail line, I-87, and the Port of Coeymans, including: Atlantic Cement Company, Callanan Road Improvement Company, activities at the port, and the Coeymans recycling center.
- Industrial uses are sparse in the Towns of Guilderland, New Scotland, Knox, Berne, Westerlo, and Rensselaerville.





ELECTRONICS MANUFACTURING, COHOES

Photo Credit: PVA



LAFARGE CEMENT PLANT, RAVENA

Photo Credit: Aggregates Manager



BETHLEHEM INDUSTRIAL CENTER, SELKIRK

Photo Credit: Spotlight News

EXISTING CONDITIONS

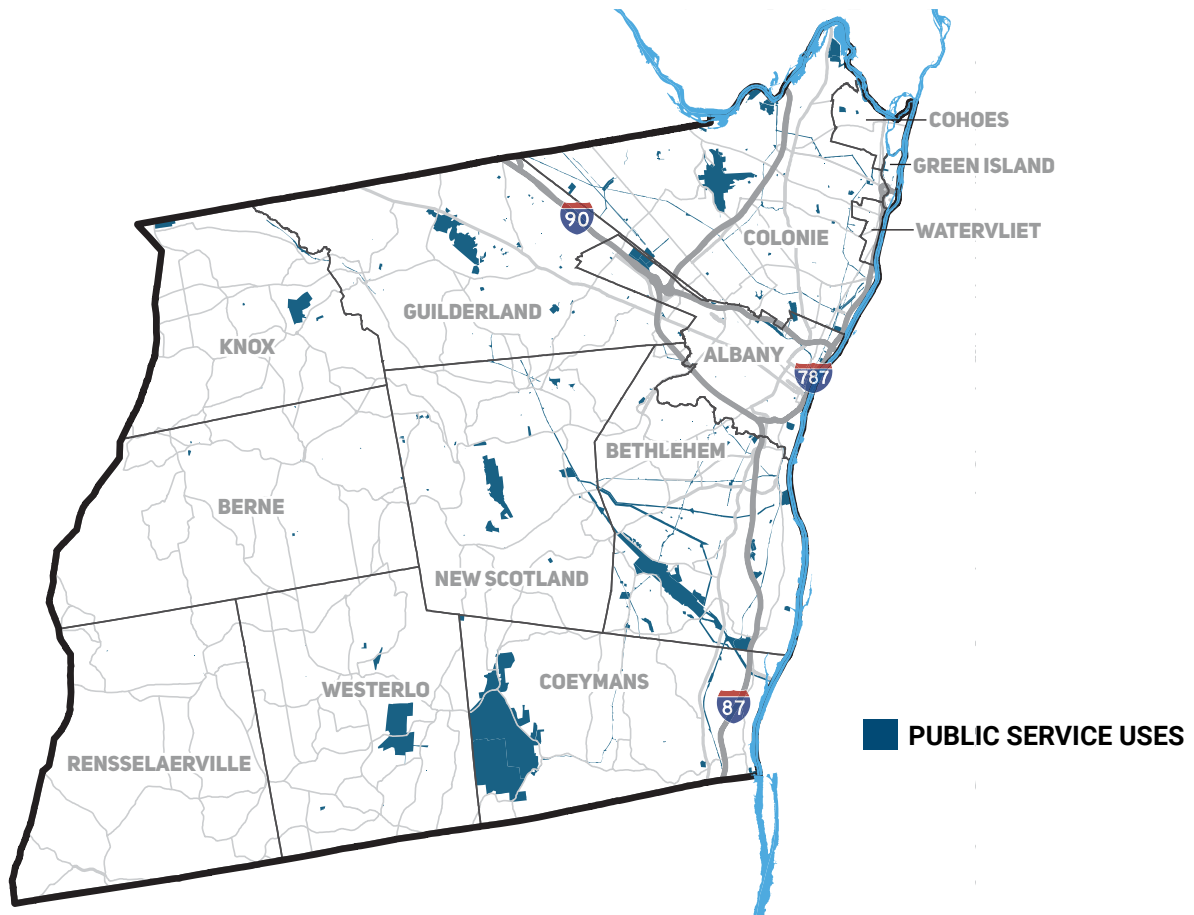
LAND USE

PUBLIC SERVICE

Public service uses comprise approximately 3% of the total land area in Albany County and include areas designated to the provision of public services, such as water supply, treatment, and transmission; telecommunication; transportation services; pipelines; electric and gas facilities; waste disposal; and, sewage treatment.

The distribution and characteristics of public service uses vary by municipality:

- Public service uses are not present in the Town of Rensselaer and are limited in the City of Watervliet.
- In the City of Albany, the predominant public service uses are related to the landfill on Rapp Road, sewage treatment, and rail transportation corridors.
- In the Town of Colonie, many of the public service uses are associated with water supply and treatment, electric utilities, the Albany County airport, and the Town's landfill.
- In Bethlehem, public service uses are comprised of water distribution, sewage treatment electricity and gas transmission, and rail transportation infrastructure.
- In the Towns of Guilderland, Knox, New Scotland, Westerlo, and Coeymans large areas are dedicated to the protection reservoirs and municipal water supplies.





BETHLEHEM WATER PURIFICATION PLANT

Photo Credit: Times Union



ALCOVE RESERVOIR, COEYMANS

Photo Credit: Flickr



ALBANY COUNTY AIRPORT, COLONIE

Photo Credit: Wikipedia

EXISTING CONDITIONS

LAND USE

RECREATION + COMMUNITY SERVICE

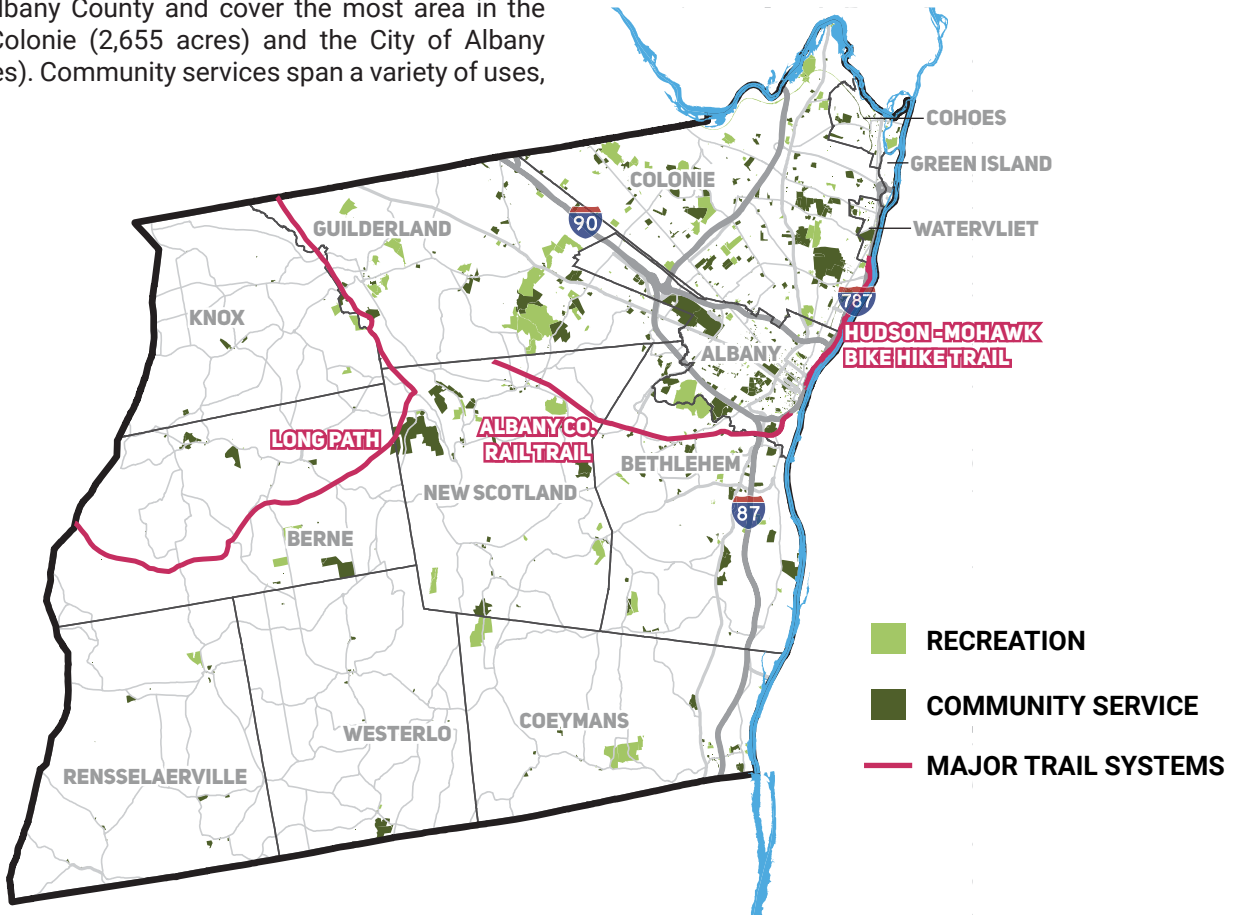
Recreation and community services uses comprise approximately 4% of the total land area in Albany County and are concentrated where population is relatively dense.

Recreation uses cover approximately 6,900 acres across the county. Recreation uses in Albany County include theaters, sports facilities (indoor and outdoor), amusement facilities, country clubs, marinas, camping facilities, and parks and playgrounds. Outdoor sports facilities (e.g., public and private country clubs, swimming pools, and riding stables) cover the greatest area in Albany County (3,960 acres), followed by parks and playgrounds (1,410 acres), camping facilities (565 acres), and amusement facilities (515 acres).

Community service uses comprise approximately 10,500 acres in Albany County and cover the most area in the Town of Colonie (2,655 acres) and the City of Albany (1,985 acres). Community services span a variety of uses,

including educational, religious, healthcare, government, public safety, cultural and recreational facilities, and cemeteries. Countywide, community service uses covering the greatest area include: educational uses (3,255 acres), religious uses (2,640 acres), cemeteries (1,415 acres), and government facilities (780 acres). Nearly half of the area dedicated to government facilities is located in the City of Albany (435 acres).

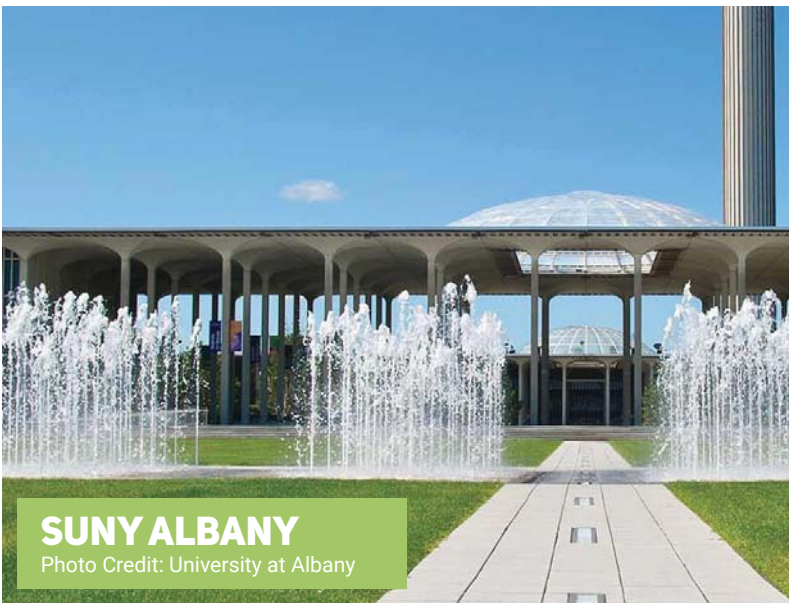
Approximately 50% of recreation uses and 65% of community service uses are within one-half mile of a bus route. Major countywide trail systems, such as the Long Path and the Albany County Helderberg-Hudson Rail Trail provide additional multimodal connectivity to more rural recreation opportunities and community services.





WASHINGTON PARK

Photo Credit: Discover Albany



SUNY ALBANY

Photo Credit: University at Albany



LAWSON LAKE

Photo Credit: Andy Arthur



CAREY INSTITUTE FOR GLOBAL GOOD

Photo Credit: Duane Fernandez

EXISTING CONDITIONS

LAND USE

CONSERVATION

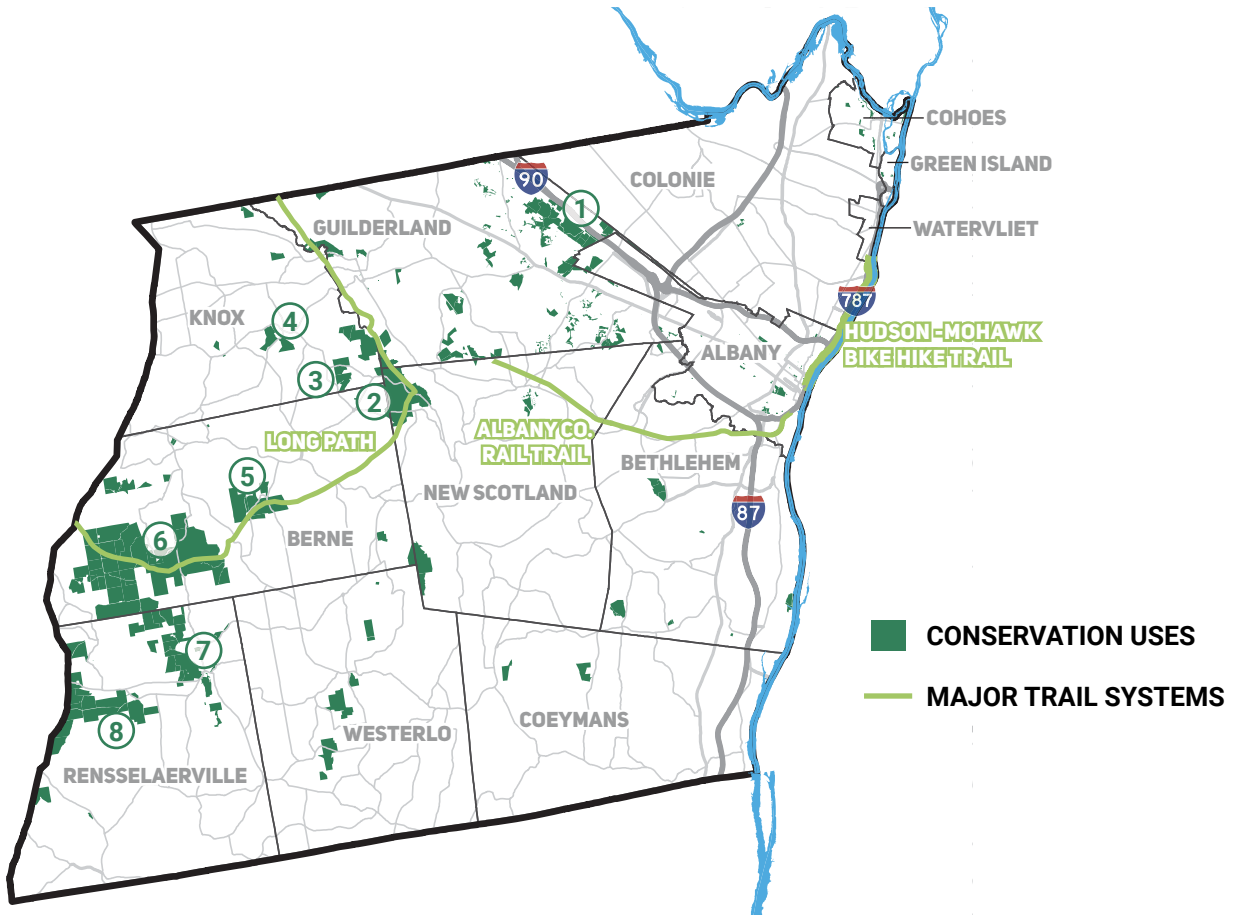
Conservation uses comprise approximately 5% of the total area in Albany County and are concentrated in the more rural towns of Rensselaerville (7,575 acres), Berne (7,170 acres), Guilderland (3,330 acres), and New Scotland (1,625 acres).

Large, contiguous areas of conservation lands in Albany County include the following parks, preserves, and wildlife management areas:

1. Pine Bush Preserve
2. John Boyd Thacher Park
3. Thompson's Lake State Park
4. Margaret Burke Wildlife Management Area

5. Cole Hill State Forest
6. Partridge Run Wildlife Management Area and State Forest
7. Huyck Preserve
8. Rensselaerville State Forest

Connectivity between these conservation areas is provided by the Long Path, a 357-mile trail system connecting New York City to the Capital District, and to a lesser extent, the Albany County Helderberg-Hudson Rail Trail.





JOHN BOYD THACHER STATE PARK
Photo Credit: Open Space Institute



HUYCK PRESERVE
Photo Credit: All Over Albany



THOMPSON'S LAKE
Photo Credit: Andy Arthur



ALBANY PINE BUSH PRESERVE
Photo Credit: Albany Pine Bush Preserve

EXISTING CONDITIONS

LAND USE

VACANT

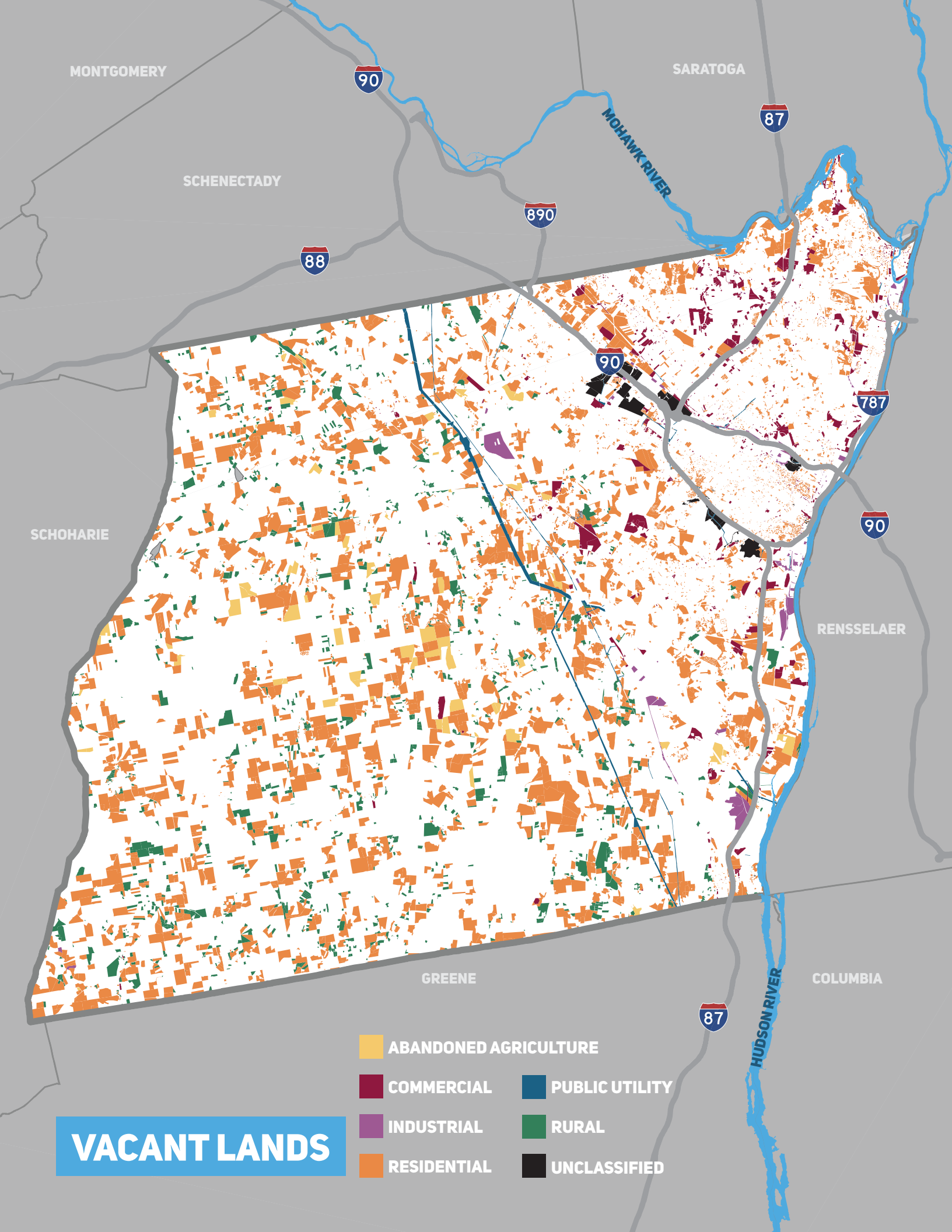
Vacant land uses comprise 18% of the total land area in Albany County and are relatively evenly distributed throughout the county. Vacant land uses are classified into several different categories by the New York State Department of Taxation and Finance, and these different categories of vacant land are described below and summarized in the map on page 79.

- Abandoned agricultural lands are concentrated in the Towns of Berne (1,330 acres) and New Scotland (1,025 acres).
- Vacant commercial lots are most abundant in the Towns of Colonie (2,040 acres) and Bethlehem (795 acres); conversely, the City of Watervliet has less than 1 acre of vacant commercial land.
- Vacant industrial lots are most common in the Towns of Bethlehem (490 acres) and Coeymans (375 acres) and the City of Albany (230 acres), while the Towns of Colonie (15 acres), New Scotland (10 acres) and Cohoes (0.5 acres) have less than 20 acres of vacant industrial lands.
- Vacant land owned by public utilities is concentrated in the Towns of Guilderland (615 acres), New Scotland (500 acres), and Coeymans (340 acres).
- Vacant residential lots occur throughout the county, with the Towns of Rensselaerville (10,500 acres), Westerlo (7,765 acres), New Scotland (6,945 acres), Berne (6,060 acres), and Coeymans (6,042 acres) all exceeding 6,000 acres of vacant residential land.
- Vacant rural lots are concentrated in the rural towns of Rensselaerville (2,315 acres), Coeymans (1,540 acres), Westerlo (1,500 acres), Knox (1,280 acres), Berne (1,170 acres), and New Scotland (1,150 acres).

TYPES OF VACANT LAND IN ALBANY COUNTY

data derived from parcel data provided by Albany County

LAND USE CLASSIFICATION	TOTAL AREA (ACRES)	PERCENT OF VACANT LAND (%)
ABANDONED AGRICULTURAL LAND	3,433	4%
COMMERCIAL LOTS	4,582	6%
INDUSTRIAL LOTS	1,367	2%
PUBLIC UTILITY LAND	1,615	2%
RESIDENTIAL LOTS	60,333	74%
RURAL LOTS	10,248	13%
UNCLASSIFIED	174	0.2%
TOTAL VACANT LAND	81,750 ACRES	



MONTGOMERY

SARATOGA

SCHENECTADY

SCHOHARIE

GREENE

COLUMBIA

RENSSELAER

90

87

890

88

90

787

90

87

ABANDONED AGRICULTURE

COMMERCIAL

INDUSTRIAL

RESIDENTIAL

PUBLIC UTILITY

RURAL

UNCLASSIFIED

VACANT LANDS

EXISTING CONDITIONS

PLANNING EFFORTS

INTRODUCTION

Planning represents a critical first step in defining a community's economic development goals and initiatives. In particular, comprehensive plans and other land use plans provide important decision-making frameworks for local governments and create transparency and predictability for existing and future businesses by identifying strategic areas, supported by existing infrastructure, for future development. These plans also ensure residents experience a high quality of life by prioritizing the development of public infrastructure systems, the provision of community services, and the conservation of land to enhance public recreation, ecological function, and preserve the natural beauty of a place.

A community's ability to create and maintain comprehensive land use plans and implement supporting policies is directly related to its organizational capacity. Frequently, sparsely populated, rural towns with limited budgets are unable to regularly update land use plans and/or develop resources to advance those plans, while more urbanized areas with a large tax base have sufficient capacity to maintain land use plans as well as develop resources that support quality of life and business development.

This section addresses the following topics:

- Municipal planning efforts + local capacity
- County planning efforts + capacity
- Opportunities

MUNICIPAL PLANNING EFFORTS + LOCAL CAPACITY

Comprehensive plans, which define a community's vision and establish long-range goals and land-use strategies for achieving that vision, directly impact economic development. The comprehensive planning process is characterized by extensive community engagement, data collection, and analysis, and culminates with the development of a final master plan. This final plan serves as a local government's decision-making framework to ensure new development is consistent with the community's vision and goals.

With the exception of the Town of Green Island, all towns and cities in Albany County have comprehensive plans. The Town of Berne and the City of Cohoes updated their comprehensive plans in 2017, and several towns and cities are currently updating their comprehensive plans or are planning to in the near future, including: the Town of Colonie, the Town of Bethlehem, the Town of New Scotland, and the City of Albany. The Towns of Coeymans, Guilderland, and Rensselaerville have not updated their comprehensive plans in ten or more years.

Albany County municipalities have varying degrees of local capacity to conduct planning and proactive economic development initiatives (see tables on pages 81-83). Urban and suburban municipalities, such as the City of Albany and the Towns of Bethlehem and Colonie, generally have more capacity to develop resources and implement strategies that improve residents' quality of life, create a sense of place, and foster economic development that is aligned with the community's vision and goals. More rural, less populated municipalities, such as the Towns of Berne, Coeymans, Rensselaerville, and Westerlo, have limited capacity and focus more on enforcing existing land use regulations than proactively developing resources that advance the community's vision and economic development goals.

City of Albany

The City of Albany recently overhauled its zoning code and adopted a Sustainable Development Ordinance

PLANNING EFFORTS: ALBANY COUNTY MUNICIPALITIES

MUNICIPALITY	COMPREHENSIVE PLANS		OTHER PLANNING EFFORTS, RESOURCES, & CAPACITY*
	DATE ADOPTED	UPDATE STATUS	
ALBANY, CITY	April 2012	Updating the plan is a priority, but no timeline has been established	<ul style="list-style-type: none"> • Unified Sustainable Development Ordinance (adopted June 2017) • Planning & Development Department • Industrial Development Agency • Albany Port District Commission • Historic Resources Commission • Robust Geographic Information System and online mapping tools • Small Cell Aesthetic Standards (2019) • Albany Energy Plan (2015)
BERNE	April 2017	N/A	<ul style="list-style-type: none"> • Zoning ordinance (adopted 2005) • Conservation Board
BETHLEHEM	August 2005	The Town is preparing to update its comprehensive plan and has conducted a series of community forums in preparation	<ul style="list-style-type: none"> • Zoning ordinance (updated April 2016) • Industrial Development Agency • Economic Development & Planning Department • Bicycle & Pedestrian Committee • Development Planning Committee • Local Waterfront Revitalization Advisory Group • Conservation Easement Exemption Program • Open Space Plan: Conservation Criteria Implementation (Dec. 2017)
COEYMANS	August 2006	N/A	<ul style="list-style-type: none"> • Zoning ordinance (updated July 2017) • Conservation Advisory Council formed in 2016 to inform and enhance the preservation of the Town's natural and historic resources

*All towns and cities in Albany County have zoning appeal boards and planning boards that administer the zoning code and oversee the site plan/development plan review process.

PLANNING EFFORTS: ALBANY COUNTY MUNICIPALITIES (CONT.)

MUNICIPALITY	COMPREHENSIVE PLANS		OTHER PLANNING EFFORTS, RESOURCES, & CAPACITY*
	DATE ADOPTED	UPDATE STATUS	
COHOES	August 2017	N/A	<ul style="list-style-type: none"> • Zoning ordinance (updated May 2019) • Economic and Community Development Department • Industrial Development Agency • Historic Preservation & Architectural Review Board
COLONIE	2005	The Town is currently undergoing a comprehensive planning process. A draft update of the comprehensive plan was publicly released in April 2019.	<ul style="list-style-type: none"> • Zoning ordinance (adopted in 2007) • Planning and Economic Development Department provides a suite of land use-related services • Industrial Development Agency • Local Development Corporation • Small Business Advisory Council • Conservation Advisory Council • Website providing one-stop-shop for businesses • Robust Geographic Information System and online mapping tools
GREEN ISLAND	None	N/A	<ul style="list-style-type: none"> • Zoning ordinance (updated Sept. 2018) • Industrial Development Agency
GUILDERLAND	August 2001	N/A	<ul style="list-style-type: none"> • Zoning ordinance (updated Jan. 2016) • Planning Department processes subdivision applications, coordinates review among agencies, maintains the official zoning map, engages with the public, and administers the Town's Geographic Information System (including an interactive mapping website) • Industrial Development Agency • Conservation Advisory Council • Land Use Advisory Committee

**All towns and cities in Albany County have zoning appeal boards and planning boards that administer the zoning code and oversee the site plan/development plan review process.*

PLANNING EFFORTS: ALBANY COUNTY MUNICIPALITIES (CONT.)

MUNICIPALITY	COMPREHENSIVE PLANS		OTHER PLANNING EFFORTS, RESOURCES & CAPACITY*
	DATE ADOPTED	UPDATE STATUS	
KNOX	2015	N/A	<ul style="list-style-type: none"> • Zoning ordinance (updated May 2017) • Building/Zoning Department administers zoning and building codes • Agricultural Advisory Committee • Conservation Advisory Council • Broadband Committee
NEW SCOTLAND	July 2012	The Town is currently undergoing a comprehensive planning process. A draft update of the comprehensive plan was publicly released in July 2018.	<ul style="list-style-type: none"> • Zoning ordinance (updated July 2006) • Comprehensive Plan Update Committee to guide the planning process associated with the Town's comprehensive plan update
RENSSELAERVILLE	March 2007	N/A	<ul style="list-style-type: none"> • Zoning ordinance (updated Sept. 2015) • Wind Study Committee formed to draft zoning regulations and recommend policies related to wind power facilities (no activity since 2010) • Telecommunications Committee formed to improve public safety emergency communications systems, increase cellular telephone access, and expand broadband access (no activity since 2007)
WATERVLIET	January 2010	N/A	<ul style="list-style-type: none"> • Zoning ordinance (updated Sept. 2013) • Planning and Community Revitalization Department works with the Watervliet Business Association to improve the commercial climate for existing and potential businesses
WESTERLO	May 2014	N/A	<ul style="list-style-type: none"> • Zoning ordinance (updated Mar. 2018) • Broadband Research Committee

*All towns and cities in Albany County have zoning appeal boards and planning boards that administer the zoning code and oversee the site plan/development plan review process.

EXISTING CONDITIONS

PLANNING EFFORTS

(USDO) in 2017, which consolidates all of the City's development-related regulations into a single unified code document. The USDO creates a more consistent, logical, and predictable framework for reviewing and encouraging new development. The City is also pursuing several initiatives and capital infrastructure projects to address the following priorities:

- Waterfront connectivity (e.g., South End Connector, which will connect the Helderberg-Hudson Rail Trail to the Mohawk-Hudson Bike Hike Trail)
- Neighborhood connectivity (e.g., complete streets policy)
- Multimodal connectivity (e.g., Clinton Avenue infrastructure project to improve multimodal access)
- Updating older plans (e.g., Albany 2030, the City's comprehensive plan, and the City's Bicycle Master Plan) and implementing existing plans (e.g., park improvement plans)

The City of Albany also prioritizes the improvement of business development resources and is in the preliminary stages of pursuing a project that would create a one-stop-shop for businesses. The City already has a robust online GIS database, but is interested in integrating this asset with additional resources, such as permitting and licensing requirements and tools to facilitate the identification of properties that meet a developer's needs.

Town of Bethlehem

The Town of Bethlehem is currently updating its 2005 comprehensive plan. The Town has conducted a series of community listening sessions to begin to understand how the community's values and interests have changed in the past 15 years. Preliminary results indicate the community wants to maintain its sense of place and suburban character (proximity to urban and rural areas), as well as highlight multimodal and environmental sustainability priorities. The Town is also pursuing several infrastructure projects, such as water treatment plant upgrades, and has integrated solar PV into its zoning law to better accommodate future development.

In an effort to preserve and enhance the Town's natural resources, the Town developed an Open Space Plan in 2017, which includes a town-wide inventory of open spaces and a list of 25 data-driven Conservation Criteria to evaluate open space land for its conservation value. In conjunction with this open space planning effort, the Town also created a GIS Conservation Analysis Tool to evaluate and prioritize the conservation of open space. This plan and associated tools are used to inform decision-making by the Town Board, Planning Board, Planning Department, and the Conservation Easement Review Board. The Town also established a Conservation easement Exemption (CEE) program, which is intended to conserve open space, maintain the town's scenic character, and provide financial incentives to property owners willing to forego development rights in order to maintain open space.

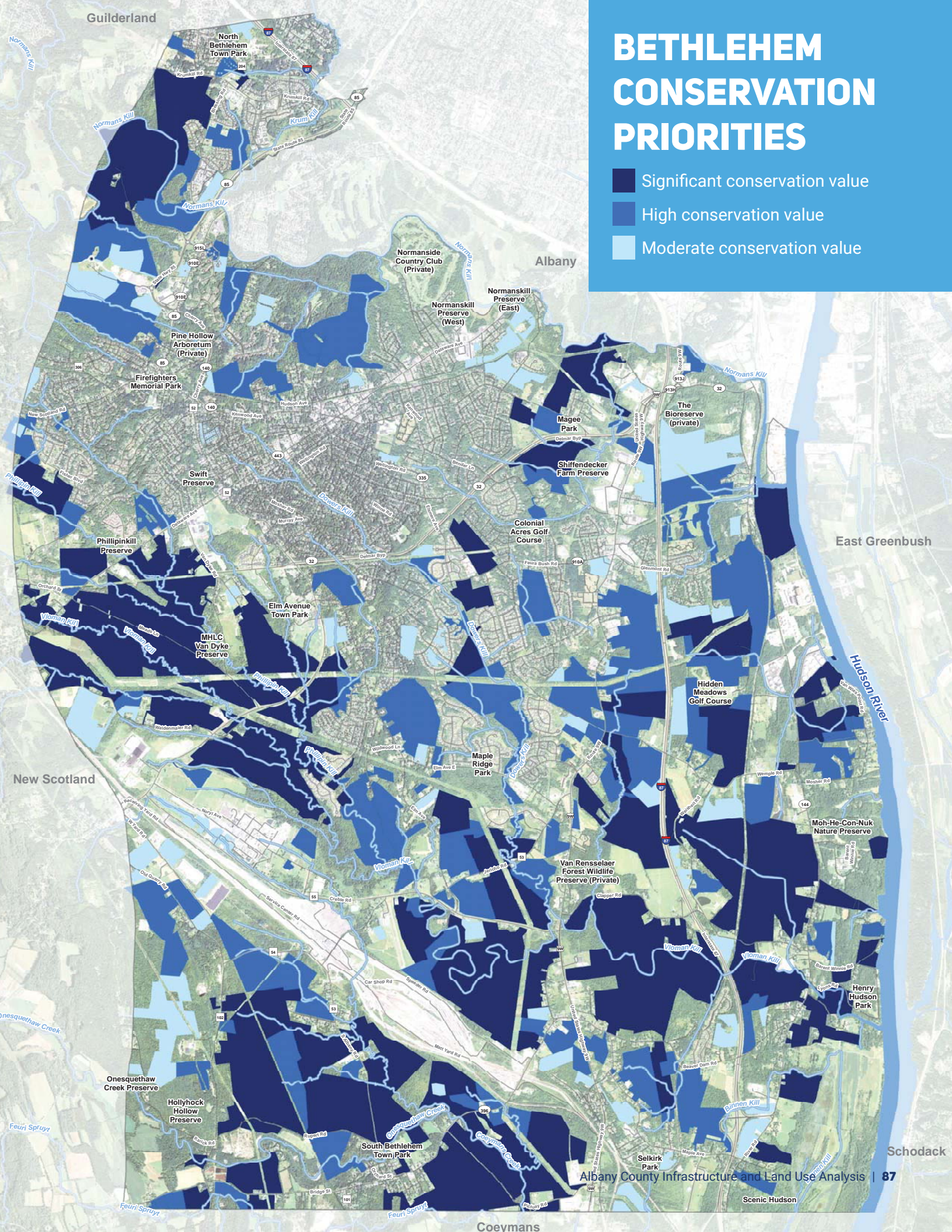
The Town of Bethlehem's Economic Development & Planning Department maintains and regularly updates an inventory of targeted sites for future economic development. The inventory includes property location and ownership information, property size, available infrastructure, and regulatory requirements. Example target sites include Vista Park in the Slingerlands, the Gateway Commerce Center in Selkirk, and Beacon Harbor in Glenmont.

Town of Colonie

The Town of Colonie is currently updating its 2005 comprehensive plan and has produced a full draft update. The draft plan includes a vision statement that defines the desired future for the Town, including an "exceptional quality of life with strong, well-established neighborhoods, excellent schools, and generous amenities such as parks, trails, and conserved open lands." The vision also addresses diversified transportation options, fiscal responsibility, infrastructure maintenance, the provision of high quality community services, the protection of natural resources, sustainable development practices, diverse housing stock, and the creation and retention of jobs. Compared to the Town's 2005 comprehensive plan, the updated plan modifies almost all of the goals included in the 2005 plan and also introduces new goals to achieve the Town's updated vision. These new goals include:

BETHLEHEM CONSERVATION PRIORITIES

- Significant conservation value
- High conservation value
- Moderate conservation value



Albany

East Greenbush

New Scotland

Schodack

PLANNING EFFORTS

- Continue to maintain and enhance the Town's extensive water, sewer, and local roadway infrastructure. Work with utilities and providers of fiber optic and other communications infrastructure to ensure that high quality services are available to meet the growing needs of residents and businesses. Consider adaptation strategies to ensure the resiliency of the Town's infrastructure in response to a changing climate.
- Encourage low-impact development techniques and green infrastructure to address stormwater management.
- Promote energy efficiency and conservation, the use of renewable energy, and waste reduction in the Town.

In addition to overhauling its comprehensive plan, which is a critical step in shaping the future of development within the town, the Town of Colonie has extensive capacity and resources to undertake land use planning and business development initiatives. For example, the Town of Colonie has an entire website dedicated to business resources, which:

- Consolidates important resources related to codes, permits, and licensing;
- Clearly defines the Town's approach to economic development;
- Links business to the Town's Industrial Development Agency, Local Development Corporation, and Small Business Advisory Council; and,
- Provides access to a web-based mapping application with parcel and land use information.

COUNTY PLANNING EFFORTS + CAPACITY

Albany County does not have a comprehensive plan, but the county has completed several planning studies that address land use, including the:

- **Agricultural and Farmland Protection Plan (2018).** This plan defines goals and strategies for supporting and enhancing Albany County's agricultural industries and lands. This plan is discussed in more detail on pages 52-56 of this report.
- **Multi-Jurisdictional Multi-Hazard Mitigation Plan (2018).** The purpose of this plan is to provide a comprehensive risk assessment for the county and to propose mitigation actions that proactively minimize the costs and impacts of future disasters. The plan specifically addresses climate change adaptation, existing plans/ordinances focused on reducing the impacts of natural hazards, the County's vulnerability to natural hazards (e.g., flood events, severe thunderstorms, wildfire, winter storms, extreme temperatures, etc.), and mitigation strategies to reduce risk.
- **Normans Kill Riparian Corridor Study (2007).** This report provides an overview of natural and recreational resources within the Normans Kill Riparian Corridor, which is important tributary to the Hudson River and is critical to the water quality of the Watervliet Reservoir, and makes recommendations regarding habitat protection and recreational opportunities.

Departments + Boards

Albany County has several departments and boards that focus on land use planning and economic development. These include the Department of Planning and Land Use (housed within the Department of Public Works), the Department of Economic Development and Conservation, the Planning Board, the Agricultural and Farmland Protection Board, and the Albany County Industrial Development Agency. A primary responsibility of the Department of Planning and Land Use and

EXISTING CONDITIONS

PLANNING EFFORTS

the Planning Board is to administer New York State General Municipal Law Article 12-B, §239-l, m, and n, which requires local municipalities to refer particular development applications, proposed zoning changes, and comprehensive plans to the County Planning Board for review, comment, and recommendations before a project is permitted to proceed. The County Planning Board requires applicants to complete a “Planning and Zoning Action Referral Form,” which describes the action and project. However, the Planning Board does not provide any standard guidance to applicants regarding the County’s development goals/policies, application review criteria, and decision-making timelines.

Resources

The County maintains a robust interactive online mapping system that enables the public to explore several different datasets, including: property ownership, parcel boundaries, district boundaries, recreational resources, transportation infrastructure, healthy food access, floodzones, wetlands, soils, and topography. The Department of Economic Development and Conservation also maintains a website that summarizes incentive program resources, demographic and economic data, and provides contact information for inquiries.



Albany County Government Building in Downtown Albany.

PLANNING EFFORTS

Opportunities

There are several opportunities for Albany County to work with its partners to undertake planning and business development initiatives in order to clearly define the county's vision and objectives for future development, streamline the referral process, and consolidate municipal resources into a comprehensive County database of development goals, resources, and strategic sites:

- Work with local municipalities to develop an Albany County Comprehensive Plan. This plan would define a unified vision for the County, create a transparent framework for land-use decisions, foster economic growth, and ensure future development is sustainably and strategically located. Several of the opportunities identified in Section 1 of this report (Infrastructure) could be addressed through and in support of an Albany County Comprehensive Plan, including the implementation of transit-oriented development policies, enhancement of the county's trail and recreational network, source water protection, and the development of an intermunicipal asset inventory of infrastructure. The County's recently completed Agricultural and Farmland Protection Plan represents an important component of a future comprehensive plan.
- Provide planning support to municipalities with limited capacity in order to create and/or update comprehensive plans for all Albany County municipalities.
- Partner with the MHLIC and local municipalities to create an open space plan for Albany County that defines priority areas for conservation (e.g., recreational, agricultural, and natural resources) establishes goals and strategies for achieving the County's conservation priorities, and develops a suite a best management tools for municipalities (e.g., conservation easement programs, strategies for integrating climate change issues and increasing community resilience)
- Streamline the County referral process by developing a guide that outlines the County's goals, expectations, and project evaluation criteria and collaborate with local municipalities to identify opportunities to improve the referral process for municipal-led projects (e.g., opportunities for early coordination, establishment of criteria to define which projects require thorough review vs. projects that are pre-approved).
- Establish a clear chain of communication between County and local economic development entities to ensure the county is well-aware of municipalities' economic development goals, resources, and strategic sites.
- Collaborate with local municipalities to develop a one-stop-shop for developers and business development, including a shared GIS parcel database highlighting economic development priorities, consolidation of license and permitting requirements by location, and infrastructure access (including guidelines for early coordination with utilities).

ECONOMIC DEVELOPMENT STRATEGY

ALBANY COUNTY, NY

VOLUME 4: ORGANIZATIONAL STRUCTURE

2020

PREPARED BY:



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STRATEGY COMPONENTS

- Volume 1: Executive Summary Report
- Volume 2: Economic Profile
- Volume 3: Infrastructure & Land Use Analysis
- Volume 4: Organizational Structure**
- Volume 5: Implementation Strategy

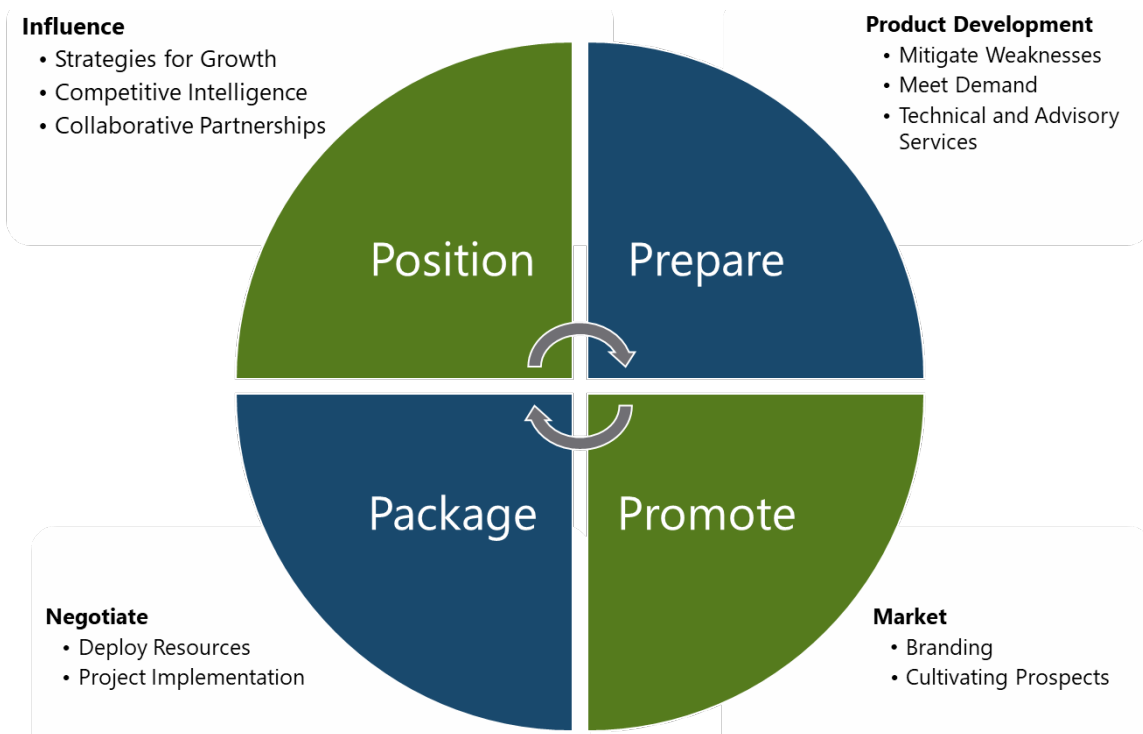
CURRENT FRAMEWORK

CORE ROLES AND RESPONSIBILITIES

The role of economic development organizations (“EDOs”) has broadened over the last two decades. Where EDOs once focused almost exclusively on incentives, sites, and marketing, they are now key leadership groups in their communities to bring multiple stakeholders together to address critical issues. For some this might include nurturing and helping manage innovation and entrepreneurial ecosystems, creating innovation districts, developing solutions to labor force skills gaps, supporting quality of life elements to attract and retain a quality workforce, identifying and targeting specific industries for business retention, expansion, and attraction, addressing existing business needs, and advocating for business and public policies that support a stronger economy, among other pressing challenges facing public and private leaders.

The roles that EDOs serve vary from community to community. In some jurisdictions, a single organization, public or private, might be expected and empowered to do it all, from forming the overall economic growth strategy, to developing the product (such as office space and shovel-ready sites) and providing technical assistance, to marketing and branding their communities, working prospective business leads to negotiation of deal financing and incentives.

Figure 1: Roles of an Economic Development Organization



In larger communities, these roles are often dispersed amongst different public and/or private entities. Where this is the case, it is imperative that close coordination and cooperation take place or, most ideally, that a single organization help orchestrate collaboration and be viewed as the champion for business-friendly activities. Regardless of how these functions are carried out among one or more EDOs, there exist four very basic roles that need to be fulfilled.

Position: This is a leadership role that involves influencing the economic agenda, conducting competitive intelligence and strategies for growth, and ensuring that multiple stakeholders come together to deal with difficult challenges and achieve common goals.

Albany County Assessment: SIGNIFICANT GAPS EXIST

Prepare: The next role is to develop the overall product. It is here that market weaknesses are mitigated. Examples include upgrading infrastructure, developing a business or industrial park where supply is lacking, establishing small business support programs, or providing technical assistance and services where needed to help encourage investment.

Albany County Assessment: NEED TO COORDINATE EFFORTS AND FILL GAPS

Promote: The third role is to market the product—the locality. This includes brand development and promotion, business development involving lead generation campaigns, and cultivation of prospects in targeted industries and global markets.

Albany County Assessment: SIGNIFICANT GAPS EXIST

Package: Finally, the community must be able to close the deal. At this stage, the EDO or designated entity must implement the project, provide the financing and incentives, or deploy the resources needed to create new jobs and investment.

Albany County Assessment: NEED TO COORDINATE EFFORTS AND FILL GAPS

Currently, different stakeholders in Albany County are engaged in some but not all aspects of the preparing and packaging stages of economic development. There is a lot of room for improvement in terms of coordinating actions and collaborating strategies and approaches in each of these areas. Two very large gaps exist in the positioning and promoting quadrants. The most serious is in the positioning role. It is here that the county “lost its way” when it dismantled its economic development department in the late-2000s and no other entity filled the space in terms of providing leadership to guide an overarching strategy for development in the county. In the intervening years, coordinated strategies, shared information, and collaborative ventures have become the exception, not the rule.

As a result, policy leaders now lack essential economic development information and performance-based metrics to enable effective management and accountability measures. There is not a county-wide business expansion and retention effort, nor is Albany County coordinated in its business attraction messaging or ability to readily host professional events and activities for corporate investors and prospective businesses. More in-depth research is needed as are efforts to help existing businesses, develop a healthier climate for businesses, improve infrastructure and promote the advantages of doing business in the county.

PROGRAMS AND SERVICES PROVIDED

A review of economic development organizations and partner groups in Albany County finds that there are multiple organizations providing different kinds, or similar, programs and services to residents, students, entrepreneurs, and the business community. (See Attachment A: Gap Analysis).

A summary of six key functions provided in counties across New York State and the other US states that have well established economic development services is provided below.

Business Retention & Expansion (“BR&E”) is one of two most traditional and common efforts EDOs undertake to strengthen economies (the other being business attraction.) A BR&E program requires periodic meetings with local businesses to understand their needs, along with any barriers or issues that may impede growth, such as infrastructure, workforce, permitting, financing, etc. Many utilize a formal Customer Relationship Management (“CRM”) tool to record data, convert it to business and industry information, analyze it over time and feed intelligence into the organization’s marketing and attraction program.

Albany County Assessment: Coordination is needed as there are some individual EDOs in Albany County that conduct varied BR&E programs: several of the County’s local IDAs meet with businesses within their jurisdiction and the Center for Economic Growth (CEG) has a BR&E program focused on its targeted industry clusters (generally manufacturing and technology). However, the information collected during business visits is rarely shared with regional partners and most businesses in the region are never engaged in these program offerings.

The pooling of resources to market a region to attract new businesses and investment may be the founding purpose of an EDO. New business attraction entails marketing and promotion of the community and sites to outside business and development interests. These programs are typically targeted to businesses that are within, or a part of, an existing supply chain or industry that has been identified as competitive relative to other regions. Investments in attraction efforts typically involve industry tradeshow attendance and/or conducting familiarization or developing relationships with site selectors.

Albany County Assessment: Gaps exist, and questions abound in Albany County for a business considering relocation or establishing a new facility. What properties are available for development in Albany County? What incentives are available to my business if I move here? Who do I talk to about investing in Albany County? There is not a single portal or point-of-contact where a potential investor can go to get information about opportunities in Albany County.

EDOs must determine their competitive advantages and why certain industries and sectors are stronger and performing better within their region relative to others. Successful EDOs focus investments and capacity on strengthening those advantages and developing programs and initiatives that support businesses within a targeted cluster. The majority of EDOs focus on strengthening existing industries and attracting supply chain firms and new companies in targeted sectors, and have analyzed economic and employment data to identify their targets.

Albany County Assessment: Collaboration is needed in the 8-county Albany Capital Region. CEG leads targeted industry efforts around technology and manufacturing sectors (health, bio, nano, clean/energy, and information). Beyond these sectors, marketing and attraction efforts are limited.

With small businesses responsible for most new job creation within a region, many EDOs offer financing, training and other technical assistance and services to start-ups and existing entrepreneurs. Supporting start-up and entrepreneurship through programs offering access to capital are also common activities. Many EDOs establish and manage local loan programs designed to participate in higher risk lending with local banks and/or Federal programs.

Albany County Assessment: Coordination and greater collaboration is needed as there are multiple organizations providing small business assistance and support to entrepreneurs throughout the Capital Region. Specifically, CEG and SUNY Albany, among many others at the municipal level, are coordinate efforts to further activate and strengthen the entrepreneurial ecosystem and help small businesses succeed.

Given that the availability of a skilled workforce is now the single-greatest barrier to growth for large and small companies, economic development organizations have been working with state and local workforce officials, community colleges, Workforce Investment Boards (“WIBs”) and others to develop training programs and career pathways that address specific gaps in labor skills. These programs typically focus on targeted industries.

Albany County Assessment: Room for improvement. While there are many regional workforce development efforts underway, Albany County has not been ‘at the table’ to make workforce development a top priority.

Owning and developing property, business parks, or shovel-ready industrial sites, streamlining the permitting process, leading a downtown revitalization effort, completing an economic development strategy, or becoming involved in addressing a workforce housing shortage are also among the types of efforts and roles economic development organizations can serve in an economy.

Albany County Assessment: Regional coordination is lacking as is local planning, development and collaboration. Some of this work is being led by local governments and organizations in Albany County without the benefit of seamless coordination with county leadership.

Some cities and towns within the county provide many of the core economic development functions described above, but there is no go-to entity for economic development for the interests of the entire county. Albany County leaders are in good position to address these shortcomings by educating stakeholders, encouraging the formation of collaborative partnerships, and establishing a county-centric organization to provide the leadership necessary to produce changes. Movement in this direction should be initiated with the following principles in mind:

Balance: the best decisions for Albany County will be influenced by experience and grounded by solid data to support the interests of parts of the county

Big picture thinking: the key to moving the needle is to focus on system and process solutions that best position Albany County as an economic driver for the Capital Region

Inclusiveness: embracing social equity is essential for realizing broad-based prosperity for all citizens, municipalities, and neighborhoods of the county

Integration: economic development is an integrated process involving many interests and disciplines, all of which are represented in the County or nearby in the region, but which need to work better together to achieve mutual goals

“One Voice”: bridging divides within Albany County is possible and all-important, but leveraging assets beyond municipal borders—inside and outside the county—is a modern-day imperative for economic competitiveness

PROPOSED ORGANIZATION STRUCTURE

CONSIDERATIONS

The Albany County Business Advisory Board that advised this strategic planning process considered different options for how to best mitigate the economic development weaknesses and address the gaps evident in Albany County. Specifically, the committee evaluated the pros and cons of establishing or utilizing an existing separate 501c(3) organization, forming a Local Development Corporation, expanding the Albany County IDA or forming a fully-staffed department within County government. For each of these scenarios, the committee followed a decision tree process to assess the capacity and ability to deliver on critical elements influencing future success: Trust Among Partners, Sustainability of Operations, Private Sector Engagement, Public Finance and Development.

Trust	Sustainability	Private Sector Engagement	Finance and Development
Foster Collaboration	Potential Operational and Financial Stability	Advocacy, Independent Voice	Develop projects, acquire real estate, construct
Flexibility to Develop Programs, Policies, Initiatives	Potential to Generate Income	Capacity for Private Sector Involvement, Broad Based Decision Making	Administer Financing Programs, Grants/Loans
Voice for ED/Marketing Champion	Potential for Dedicated Revenue Stream via Public Resources	Broad Based Decision Making	Bold and Creative, Get It Done Approach

The first level for consideration was to evaluate which structure would have the best chance for fostering trust amongst existing entities in the county. This involves the ability to encourage collaboration, to be nimble and flexible in responding to challenges, and to serve as an authoritative, credible voice for marketing Albany County’s advantages to help spur business expansion and attraction. The second level evaluated the financial feasibility, viability, and sustainability of operations. The third level gauged probabilities for private sector and institutional leaders to be part of any new county-based economic development initiative. The consideration here was to evaluate structures that could have the optimal leadership mix of public and private sector representatives. The fourth consideration was the ability of a new entity to assume, when and if needed, a role in developing real estate and providing equity and financial support to achieve the County’s long-term economic goals.

PATH FORWARD

Based on analysis provided by the consultant, and thorough discussion, the Albany County Business Advisory Board concluded that a new Local Development Corporation needs to be established to meet the objectives of addressing unmet economic development needs in Albany County. At the same time, there is also a critical role for the County to assume to facilitate collaboration amongst organizations in the county and possibly to lead a fully functioning Department of Economic Development. Scoring for the advantages of creating an LDC exceeded that of a utilizing an existing or establishing a new not-for-profit organization by a significant margin. The LDC option was scored more than double the weighting of establishing a new County department to do it all or utilizing the existing IDA, both of which had significant restrictions precluding them from carrying out the goals envisioned.

Recommendation: A Local Development Corporation should be formed as an independent corporation to promote economic development to benefit the public good and manage public interest projects on behalf of Albany County government. As such, it would be considered a New York State Public Benefit Corporation and operate with general corporate powers under the State’s not-for-profit corporate law.

As a Local Development Corporation, this new entity would have powers to construct and acquire development projects and could be used to issue bonds backed with payments from project revenue and government.

Existing LDCs of Albany County government currently include: the Albany County Local Development Corporation established in 1983 which serves as the conduit for the Capital Region Chamber to administer the AI Tech Loan Fund; Albany County Airport Authority (Capital Region Airport Development Corporation) established in 1990; the Albany County Land Bank established in 2014; and, the Albany County Capital Resource Corporation affiliated with the Albany County IDA.

Recommendation: Albany County needs to fill the vacant position of Director of Economic Development with a senior level executive to provide advice, guidance, and collaborative leadership. This position is critical to the economic future of the County regardless of whether the LDC recommendation is or is not adopted. The County Executive and Legislature moved in the right direction recently when it removed a charter provision that specified that the County Economic Development director must have a degree in Planning.

This position would work with the new LDC to help coordinate and execute the County’s priorities. The Director of Economic Development, as a direct report to the County Executive, would help address unmet or under-represented needs, such as coordinating BRE efforts countywide, marketing, sites and infrastructure, export and FDI support, placemaking, and/or leveraging support for tourism and cultural activities to produce countywide economic gain. Several Capital Region counties have departments that fulfill some if not most of these activities, such as Columbia, Greene, Rensselaer, and Washington Counties.

The County’s Economic Development Director would have a lead or supporting role with coordinating economic development policy and programmatic priorities with the County Executive and County Legislature.

New Local Development Corporation	County Economic Development Office
Champion Economic Development	Promote Business Friendly Climate
Business Attraction	Policy Development/Special Initiatives
Direct Foreign Investment	Business Retention and Expansion
Marketing and Branding	Trade and Export Assistance
Real Estate Development	Advance Tourism/Sports/Cultural Events
Research and Evaluation	Workforce Development Partnerships
Place Making	Small Business Development and Entrepreneurship Networking

GOVERNANCE

The LDC would have its own Board of Directors comprised of business and civic leaders, philanthropic, academic and nonprofit executives, along with public sector officials.

Effective boards and committees adopt and embrace protocols for how they function. In taking a new direction Albany County can bring forward positive attributes to help with effective governance and program implementation.

Examples of such protocols to advance might include:

- Achieve consensus with each board member having equal share vote
- Attend meetings, actively participate, and speak-up—no proxies
- Be positive, avoid negativity and lectures on past failures
- Be honest, objective and transparent
- Be open to new ideas and proactive in addressing concerns
- Build new relationships to break patterns and creatively seek solutions
- Celebrate!
- Embrace continuous improvement, be adaptable and flexible
- Insist on mutual accountability through metrics
- Share resources, information and data: do not weaponize it, agree that data is going to drive our strategies and tactics
- Share viewpoints with respect and engage in civil discourse
- Trust each other, keep confidentiality, and credit the group

The most effective number of members to a Board of Directors for this purpose is no larger than 15 members. The board size must be large enough to accommodate the breadth of interests engaged in economic development related issues, and to ensure balanced geographic representation. It is recommended that board positions have staggered terms and that once operational, appointments for open seats be made by the board. The majority of seats should be held by business and non-governmental representatives. Gender and racial representation in each of the termed positions must be a top priority and it is recommended that a certain number of board seats be dedicated based on the county's demographic makeup.

Given the public private nature of the organization, consideration should be given to a board that is led by equal co-chairs that include the County Executive and either a CEO of a county-based business or a of a local philanthropic foundation. The second co-chair position is intended to be a person who is not involved in providing day-to-day programmatic services but rather represents business or broader civic leadership. Alternatively, the board might have a single private chairperson with the County Executive having power to appoint a limited number of board seats.

The board should form an Executive Committee of 5-7 individuals, along with standing committees, such as Nominations, Finance, Policy and Programs, Public Advisory. The majority of the executive committee members should represent the business community. A Public Advisory Committee of the Board of Directors could be formed and comprised of local elected and appointed officials who will provide input to the board on issues of concern to municipal jurisdictions.

A separate Business Advisory Committee should be formed to help County government with managerial input and resources as needed and assist County elected leaders with consideration of policies and implementation of new programs and initiatives.

It is recommended that the County Executive form a representative group of public and private leaders to come together as an Ad Hoc Planning Committee to help guide activities in the formative stages. This committee would work with the County Executive to decide on the proper corporate structure and to implement the steps outlined in the Action Plan Matrix included in the Strategic Plan until a board or Business Advisory committee is constituted.

One of its first tasks will be to develop a Communications Plan to provide continuous, transparent information to stakeholders and interested third parties on its progress. This is called out to stress the importance of sharing developments from the very outset which will help build momentum for change. The Communications Plan will also provide the foundation for the board of directors to brand and market its agenda to constituents inside the county and external audiences. This Plan will also help build alliances with other regions and provide an investor prospectus for securing resources for the new Local Development Corporation.

STAFFING

The County should hire a Director of Economic Development to report to the County Executive. This person is to be the public facing executive to represent the economic and workforce development interests of the County. Presently, the County has budgeted for a full-time staff position. Initially, a full-time staff person should be employed to coordinate the activities of the Board and to facilitate the activities of the new organization. In addition, a professional search process should be undertaken to recruit a President and CEO to run the new local development corporation.

FUNDING

Based on similar organizations operating in other counties around the nation, and given its likely mission, it is projected that the new organization would require an annual operating budget in its formative years of approximately \$1MM. This funding would cover costs of staffing and overhead for the start-up staff, implementation, early communications and marketing, consulting and other costs that fall outside of normal overhead and administration. As the organization grows and matures, the costs will grow accordingly.

A working capital balance equaling \$250,000 will be required as a bridge for personnel, administrative, legal, marketing and promotion costs and other activities. This does not include funding for future positions, nor to initiate any special programs or services that the County/Board of Directors might implement. Thus, in its formative years, the new entity will require approximately \$1MM - \$1.25MM to conduct the activities noted in the Operations section B above.

One-time contributions to cover operations and seed a working fund for the first three years of operation should be raised from corporate, utility, New York State, philanthropic and other stakeholder sources. Contributions should be a condition of serving on the Board, and a sliding fee based on population of municipality should be required for participation on the Public Advisory Committee. In-kind contributions and services for space, equipment, and professional services such as audit, legal, and marketing, should be secured.

The County Executive and Legislature should consider a dedicated funding stream to help finance the new economic development activity and supplement member contributions to help cover operating expenses after the start-up phase is complete. A fraction of the Albany County Hotel/Motel Tax, amounting to no less than one percent (presently approximately \$1MM-\$1.5MM annually) should be considered to support for the new local development corporation for ongoing economic development needs of the county. The original intent of the surcharge was the promotion of economic development, arts and culture within Albany County and its various municipalities. With the convention center now functioning, support of its debt obligations and arts and culture programming is covered by the tax. Proceeds of the tax are now needed to meet the county's larger economic development purposes.

ATTACHMENT A: GAP ANALYSIS

	Core Economic Development													Integral					
	Business Retention & Expansion	Business Attraction	Marketing	Entrepreneurship	Innovation/Tech/Commercialization	Workforce Devt / Talent Attraction	Small Business Assistance	Financing and/or Incentives	Research & Analysis	Advocacy & Policy	Infrastructure	Downtown/Com'l Corridor/Retail	Export and Foreign Direct Investment	Technical Assistance/Capacity Bdg	Sites	Housing/Community Development	Placemaking / Land Use Planning	Tourism & Culture	Education
County of Albany	■	■	■			■			■	■	■	■	■		■	■	■	■	
Capitalize Albany Corporation	○	○	○					○				○					○		
Albany County Planning Dept.																	○		
Center for Economic Growth (Regional)	○	○	○	○	○	○	○		○	○			○						
Discover Albany			○									○						○	
Capital Region Chamber		○	○	○			○	○		○				○					
Bethlehem Chamber of Commerce						○	○		○			○	○	○					
Capital District Community Loan Fund								○						○		○			
Albany County IDA	○	○						○											
City of Albany IDA	○	○						○											
Town of Bethlehem IDA	○	○						○											
City of Cohoes IDA	○	○						○											
Town of Colonia IDA	○	○						○											
Village of Green Island IDA	○	○						○											
Town of Guilderland IDA	○	○						○											
Central Avenue Business Improvement District			○	○							○	○					○		
Downtown Albany BID		○	○								○	○	○				○		
Lark Street BID												○					○		
Capital Region WIB						○								○					
Port of Albany											○				○				
Albany Capital Center																		○	
Albany College of Pharmacy and Health Sciences						○													○
Albany Medical College				○		○	○							○					○
University at Albany, SUNY				○	○	○	○	○						○					○
Excelsior College						○													○
Maria College						○													○
Sage College						○													○
College of Saint Rose						○													○
Sienna College						○													○
SUNY Polytechnic Institute					○	○													○

RPI (Not Albany County)				o	o	o	o	o		o				o					o
SUNY SCCC - Central Ave - STARTUP NY						o		o						o					
HVCC EDC - Russell Road - STARTUP NY						o		o						o					
CDTA											o								
Town of Colonie Planning and ED Dept.											o	o			o		o		
Empire State Development (State)	o	o	o	o	o			o	o	o	o	o	o	o				o	
Capital District Reg'l Plann'g Commission (Regional)									o					o					
New York Business Development Corporation (State)							o	o											
Guilderland Chamber of Commerce																			
Community Loan Fund of the Capital Region								o						o		o			
Albany Center for Economic Success				o										o					
Small Business Development Center (Regional)	o			o										o					
U.S. Small Business Administration (Federal)							o	o						o					
National Grid Shovel Ready Program (Statewide)												o							
SCORE														o					
Start-Up Tech Valley (Reg'l-Troy)				o	o		o							o					
Troy Innovation Garage (Albany Bull Moose Club)				o	o		o	o						o					
Tech Valley Center of Gravity (Regional)				o	o		o	o						o					
Innovate 518 (Regional)			o	o	o		o	o						o					
Biomedical Acceleration and Comm'lzn Center				o	o		o	o						o					
Ignite U (Troy)				o	o		o	o						o					
Community Preservation Corporation								o								o			
Count	11	12	8	15	11	15	14	24	4	6	7	8	3	19	5	4	5	3	10



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ECONOMIC DEVELOPMENT STRATEGY

ALBANY COUNTY, NY

VOLUME 5: IMPLEMENTATION STRATEGY

2020

PREPARED BY:



Initiatives	Description	Lead	Partners	Timeline
Goal 1: Fill the gap that Exists in Albany County's Economic Development Ecosystem & Align Regional Resources				
Appoint Executive Liaison	This person would be designated as the point person for the County Executive to advance the County's economic growth and development interests. Initially, the role of this individual will be to assist with the formation and launch of a new economic development organization. This person might be expected to assume the permanent position as the County's Director of Economic Development.	County Executive Office		Immediate
Form Ad Hoc Organizing Work Group	Form a small Ad Hoc Organizing Work Group to advise the County Executive's Office with regard to specifics of forming a new private/public organization, establishing a diverse board of directors comprised of business and civic leaders, philanthropic, academic, and nonprofit executives, with consideration of including some public sector officials. The Work Group would help determine process for selecting a President and CEO and also be charged with assisting with securing commitments for start-up funding.	County Executive Office	Members from Strategic Planning Committee, Local officials & Civic leaders, Future board members (6-8 total members)	Immediate
Establish Albany County LDC	Establish an independent local development corporation to promote economic development to benefit the public good and manage public interest projects on behalf of Albany County government. This new entity would assume a lead role for Albany County in championing economic growth and development, attracting new businesses, marketing and branding the county to increase private investment, and creating a vibrant sense of place for residents and visitors. Working with partners, it would support business retention and expansion, innovation and entrepreneurship, and workforce development.	County Executive Office, County Legal Counsel, Ad Hoc Work Group	Local and Regional Economic Development Organizations, County Legislature	Immediate
Explore a Sustainable Funding Model	Secure financial commitments from public and private sources for early phase operations, develop a business plan for ensuring revenue-generating investments and a dedicated revenue stream to support the priorities and activities of the new LDC, develop support for and guide passage of new legislation to make it happen.	County Executive Office, Ad Hoc Work Group, LDC Board of Directors, County Legislature		Immediate
Develop a Stakeholders Communications Plan	One of the most important roles of the Economic Development Director for Albany County will be to convene the various economic development organizations and stakeholders to facilitate and collaborate efforts. Provide continuous, transparent information to stakeholders and interested third parties. Establish a clear chain of communication between County and local economic development entities. Employ many channels to 'meet people where they are' including in-person meetings, email newsletters, digital media posts, existing community events, etc. Consider investing in a digital platform designed to help management stakeholder communications and engagement (like Bang the Table).	Economic Development Director, LDC	LDC, County Executives Office, Local Municipalities	Immediate
Explore Management & Governance Options for LDC	Establish a selection committee and process for hiring a President and CEO for the new LDC. Note: This position is separate from the County Director of Economic Development position.	LDC Board of Directors		1 year
Practice Business Friendly Messaging Across all County Departments	Once a year, engage all Albany County Department heads and relevant staff to discuss best practices for engaging with the business community. Bring in speakers from local business community to talk about their experiences. Create and disseminate hard-copy information to County staff about where to direct businesses and developers seeking assistance.	Albany County,	County Department Heads, County Executives Office	1 year

Initiatives	Description	Lead	Partners	Timeline
Create and Maintain a Website for Economic Development in Albany County	Create a standalone website for the new LDC to promote economic development in Albany County. Hire a website design firm that thoroughly understands the unique user experience that must be achieved, with strong preference for one that specializes in websites for economic development. The website should include current data on workforce assets, industry sectors, employers, and demographics. Connect social media. Contact information for the ED Director should be in the footer (i.e. visual at all times). Link to the region's economic development stakeholders such as the Port, City, CEG, and local IDAs. Dedicate staff resources for ongoing maintenance of the website. Updates should occur weekly, at a minimum, to keep content fresh and top among search rankings (SEO).	LDC	Albany County	1 year
Streamline the County Referral Process	Streamline the County referral process by developing a guide that clearly defines the County's economic development goals and establishes project evaluation criteria. This initiative should be done in collaboration with municipalities to establish a unified vision for countywide economic development and to identify opportunities to expedite the referral process for municipal-led projects that are aligned with County economic development goals. The guide should include contact information, timeline expected, required documentation, etc.	Economic Development Director	County Department Heads, LDC, Local Municipalities	2-5 years* *This initiative should be conducted in tandem with the development of an Albany County Comprehensive Plan.
Create a Digital One-Stop-Shop for Economic Development in Albany County	Develop a one-stop-shop of business development resources for developers and municipalities (for planning and coordination purposes), including a countywide shared GIS parcel database highlighting strategic sites for future development, consolidation of license and permitting requirements by location, and site-specific public infrastructure access (including guidelines for early coordination with utilities). This initiative should build upon existing resources developed by municipalities (e.g., the Towns of Colonie, Bethlehem, Guilderland, and the City of Albany), as well as support the creation of these resources for municipalities with limited capacity (e.g., Towns of Knox, Westerlo, Rensselaerville, Coeymans, Berne). A first step in this initiative should be the establishment of a clear chain of communication between the County and local economic development entities to ensure the County is well-aware of municipalities' current economic development goals, resources, and strategic sites.	Economic Development Director	Local Municipalities	5 years
Coordinate a Business Retention and Expansion Program in Support of Ongoing BR&E Efforts	This is one of the most common efforts EDOs undertake to strengthen economies and a critical first-task for the County Economic Development Director. Many local economic development organizations in the County do some level of BR&E within their own communities and CEG has a regional BR&E program. Coordinate local and regional BR&E efforts that are ongoing by ensuring information is shared utilizing a formal Customer Relationship Management ("CRM") tool to record data, convert it to business and industry information, analyze it over time and feed intelligence into the organization's marketing and attraction program. Support business visitation efforts, as needed.	Economic Development Director	LDC, CEG, Local IDAs	1 year, Ongoing

Initiatives	Description	Lead	Partners	Timeline
<h2>Goal 2: Target Investments Around Catalytic Projects and Critical Infrastructure</h2> <h3>Planning</h3>				
<p>Develop an Albany County Comprehensive Plan</p>	<p>This Plan should define a unified vision for the County, inventory existing land uses and public infrastructure assets, create a transparent framework for land-use decisions, foster economic growth, and ensure future development is sustainably and strategically located. Several of the opportunities identified in the Infrastructure Analysis should be addressed through and in support of an Albany County Comprehensive Plan, including the implementation of transit-oriented development policies, enhancement of a countywide trail and open space network, source water protection, and the development of an intermunicipal asset inventory of countywide wastewater infrastructure. The County's recently completed Agricultural and Farmland Protection Plan represents an important component of a future comprehensive plan. <i>Note: County Comprehensive Plans are regulated by New York State General Municipal Law §239-d.</i></p>	<p>Albany County (inter-departmental effort)</p>	<p>Local municipalities, IDAs, CDTC, CDTA, CDRPC, Ports of Albany and Coeymans, Albany County Water Purification District, other water and sewer districts, land conservancies, State agencies (e.g., DOT, DEC, OPRHP), other stakeholders</p>	<p>2-5 years* *This plan is a critical first step in defining economic development priorities and identifying critical infrastructure projects to support these priorities. Therefore, it should be a high priority project for the County and undertaken in the short-term.</p>
<p>Create an Albany County Open Space and Trails Plan to Enhance Quality of Life</p>	<p>Create an Albany County Open Space and Trails Plan to define the County's vision for its open spaces, identify priority areas for conservation (e.g., recreational, agricultural, natural resources, landscape corridors), establish strategies for achieving conservation goals, and develop a suite of best management tools for municipalities to implement local conservation efforts in support of the countywide vision. By proactively protecting natural resources, preserving scenic viewsheds and landscapes, and developing an accessible countywide trail system that connects residents and visitors to the county's diverse natural areas, Albany County will enhance the quality of life for all of its residents (human, animal, and plant).</p>	<p>Albany County, CDTC</p>	<p>Local municipalities, Mohawk Hudson Land Conservancy, Albany Pine Bush Preserve, Nature Conservancy, NYS DEC, NYS OPRHP</p>	<p>2-5 years* *This initiative should be conducted in tandem with the development of an Albany County Comprehensive Plan or should be a direct outgrowth of the Comprehensive Plan.</p>

Initiatives	Description	Lead	Partners	Timeline
Transportation				
Adopt a Transit-Oriented Development Policy	<p>Working closely with the CDTC and CDTA, draft and adopt a transit-oriented development policy for the county that prioritizes smart growth principles and access to multimodal transportation options. This policy will provide an important framework for siting new development, improving the county's transit, bicycle, and pedestrian networks, conserving natural resources and open space, spurring economic development, and reviewing projects through the county referral process. To encourage necessary investments and support decision making and policy development, conduct economic and fiscal impact research on benefits of TOD.</p>	<p>Albany County, CDTC, and CDTA</p>	<p>Local municipalities</p>	<p>2 years</p>
Establish Rural Road Design Standards	<p>Develop rural road design standards for county-owned roads to better address the needs of all users, including the identification of priority rural road networks for the movement of agricultural goods and bicycling. The rural road design standards should specifically address the efficient movement of farm goods and machinery, including wider shoulder widths, wider bridges, shallower drainage ditches, and increased pull-off areas, and expanded opportunities for bicycle touring in order to support the growth of the county's agricultural and recreational sectors. To expand the impact of these standards, the county should work closely with municipalities and stakeholders to address local concerns and encourage the adoption of the rural road design standards at the local level, as well.</p>	<p>Albany County and CDTC</p>	<p>Local municipalities, CDTA, NYS DOT, farmers and the agricultural industry, the bicycling community</p>	<p>2 years</p>

Initiatives	Description	Lead	Partners	Timeline
Water				
Develop an Inter-Municipal Inventory of Public Water Infrastructure	Working with the Albany County Purification District, the Stormwater Coalition, and local municipalities, develop a comprehensive, spatially-explicit, intermunicipal asset inventory of countywide wastewater and water supply infrastructure. This inventory should be regularly updated (in real-time, if possible) and be used to define areas suitable for future development, identify high priority projects to improve the quality and capacity of the county's water system, and highlight maintenance priorities and opportunities for intermunicipal coordination. This initiative should be conducted in coordination with the creation of a one-stop shop for economic development and the Albany County Comprehensive Plan.	Albany County	Local municipalities, Albany County Water Purification District, Albany County Stormwater Coalition, sewer and water districts, NYS DEC, NYS EFC	2 years
Upgrade Water Infrastructure	Once an intermunicipal inventory of public water infrastructure is developed, create an action plan for upgrading county-owned water infrastructure and supporting municipalities in upgrading local water infrastructure. This action plan should consider current and projected future demand to identify high priority projects that address public health concerns, enhance system efficiencies (e.g., target areas with high leakage rates, opportunities for intermunicipal resource sharing), improve water quality, increase system reliability, and upgrade critical infrastructure to improve resiliency and support infill development. Implementation of this action plan should be coordinated with local and state partners.	Albany County, local sewer and water districts/departments, Albany County Stormwater Coalition	Local municipalities, NYS DEC, NYS EFC	10 years
Implement Source Water Protections	Working with municipalities and local land conservancies, undertake a countywide land use and watershed planning initiative to identify lands critical to the protection of municipal water supplies and public health and define strategies for acquiring and managing these lands. The final product of this initiative is a strategic plan that guides implementation, leverages public funding sources, and ensures the long-term protection of municipal water resources and the lands that buffer them. This initiative should be conducted in coordination with the development of an Albany County Open Space and Trails Plan .	Albany County, local water districts / departments, local land conservancies and conservation-oriented non-profits	Local municipalities, Albany County Stormwater Coalition, NYS DEC, NYS EFC	10 years

Initiatives	Description	Lead	Partners	Timeline
Telecommunications				
Enhance Broadband Access, Speed, and Affordability	Pursue public-private partnerships with local technology companies to expand broadband access, speed, and affordability across the county. Specific initiatives and capital projects may include: install fiber optic cable in areas targeted for economic growth; leverage the rapidly growing 4G and 5G cellular networks to build-out high-speed community broadband networks, particularly in low-income urban communities and rural farms; and, develop an alternative high-speed broadband network that is publicly subsidized to increase competition, affordability, and access	Albany County	Local municipalities, tech companies, NYS Broadband Program Office, NYS ESD	5 years
Project Development				
Support the Land Bank to on its Real Property Disposition Strategy	The Albany County Land Bank is launching a first-in-the-State market analysis and real estate planning process to strategically plan for assemblage and deposition of its vacant and underutilized properties. This is an exciting project that will require broad collaboration among many partners and the County should support these efforts as appropriate.	Land Bank	Albany County, LDC	Immediate
Prioritize Development Adjacent to the Airport	Work with the Airport Authority to advance its capital planning, while identifying public and privately owned parcels adjacent to or nearby the airport for business and commercial development. In particular, develop a redevelopment plan for the old health facility for office and research and development uses within targeted industries.	LDC	County of Albany, Airport Authority	2-5 years
Consider Reuse of County's State Street Building	The County's State Street office building is not ideally designed to accommodate modern, efficient and cost effective use for County functions. Given its strategic location it represents high value for private and State government related use. A feasibility analysis should be commissioned to evaluate selling or leasing the property and relocating County offices. Consideration needs to be given to having the County anchor a new catalytic development project elsewhere in the City of Albany or other location in the county.	Albany County, LDC		2-5 Years
Identify a Transformative Downtown Development Project	The new LDC should identify a new transformative development project in downtown Albany to focus its efforts and resources. The project should take advantage of market trends and add a unique character element to the Albany urban environment, represent the highest standards of design, advance mixed-use planning and help fill lifestyle/livability needs.	LDC	Albany County, Capitalize Albany	5 Years
Prioritize and Position Old Industrial Buildings and Sites for Redevelopment	Many large, vacant industrial buildings and sites dot the region. These properties are too large and complex for any one entity to take on. Work with local municipalities and other public-entities, such as the Land Bank, to identify vacant and underutilized properties and establish priorities and timelines for investment into demolition, redevelopment, etc.	LDC	Albany County Economic Development Director, Land Bank, Local municipalities	10 years

Initiatives	Description	Lead	Partners	Timeline
Goal 3: Create, Retain, and Attract Top Talent Around Growth Sectors				
Participate in the Workforce Development Network	Creating a pipeline of workers is critical to satisfy current and future industry needs. Partnerships between industry and educators exist, but the County is not currently engaging in these networks and, therefore, not benefiting from them. Become more engaged in existing networks and partnerships for regional workforce development.	Economic Development Director	Local and regional educational institutions, Capital Region Workforce Investment Board	Immediate
Cybersecurity, FinTech, & InsureTech				
Focus BR&E on Cybersecurity, FinTech/InsureTech	Understanding challenges and opportunities of existing cybersecurity businesses, as well as crossover businesses in other sectors who employ information security analysts (like banks and insurance companies), is a critical first step in growing this sector. Identify finance, insurance, and related technology businesses within Albany County and conduct business visits to understand their unique needs and challenges. Focus discussions around workforce needs (all skill levels), partner collaboration opportunities, and sharing information about available resources. Conduct at least 3 business-visits a month for this sector, and follow-up with technical assistance and connections to resources as needed.	LDC	Executive Director, SUNY Albany, CEG	2 years
Communicate Career Opportunities in Cybersecurity to Albany County Students and their Networks	Work with industry, educators, and service providers to develop a marketing campaign designed to educate Albany County's students, parents, and local educators about the great career opportunities in Albany County in Cybersecurity. Seek to reach diverse under-represented groups in this sector (women and minorities). Host meet-and-greets where students, parents, and teachers get to interact with local business leaders.	LDC	Local schools	3 years
Partner with Libraries to Make Youth Coding Classes Available to Students Across Albany County	The role of libraries is changing across the U.S. and many are becoming involved in locally-driven economic development and workforce development initiatives. The Albany Public Library hosts <i>Girls Who Code</i> classes twice a year to teach girls 6th-12th grade technology skills needed for future STEM careers, as well as connect them with a national network of peers and leaders in technology. Partner with the public libraries across Albany County to expand on these classes and offer middle and high school students throughout the county access to critical technology skills training that will inspire more youth to seek careers and even start businesses in STEAM fields.	Economic Development Director & Albany Public Library	Public libraries across the County, SUNY, Local businesses in Tech, STEAM Garden	3 years
Launch a Business Attraction Campaign Targeting Cybersecurity, FinTech	There is an emerging trend in high-tech sectors that could become a competitive advantage for Albany County: cost of living compared to major metro areas like NYC, San Francisco, and Chicago. While availability of talent continues to be the number one driver for locational decisions, lowering the cost of living and maintaining a high quality of life is starting to play a more important role in talent retention for high-tech companies. The strategy is to target companies in high-tech, high-cost metros and offer a lower-cost alternative. Target companies who have grown to 'Stage 3' size (more than 10 employees) and have secured several rounds of venture capital from a number of sources. In other words, the types of companies who have established themselves and no longer need to be headquartered in the more traditional high-tech (and high-cost) metros.	LDC	CEG	3 years

Initiatives	Description	Lead	Partners	Timeline
Advanced Transportation & Logistics				
Draw Local Attention to the Ports	Many people from the region are not aware that there is a port in Albany County, let alone two ports that serve international supply chains. Develop an inward-facing marketing and communications campaign designed to inform the local resident and business community about the exciting growth and career opportunities at the ports.	Albany County Economic Development Director	Port of Albany, Port of Coeymans, CEG	2 years
Create a Workforce Training Program Focused on the Warehousing, Distribution, and Light Manufacturing Industries	In partnership with the Port of Albany, create a workforce training program focused on the following industries: port operations, warehousing & storage, distribution, logistics, light manufacturing, and assembly. The Port of Albany has invested millions of dollars in infrastructure upgrades in recent years and is in the early stages of redeveloping an 80-acre parcel. This new redevelopment represents one of the largest industrial/commercial developments in the county and has the potential to create many new local jobs. Partnering with the Port of Albany in the near-term to establish a workforce training program will help equip the local population with the skills necessary to support the future growth of the light industrial, warehousing, and distribution sectors at the Port and throughout the county.	Albany County and Port of Albany	Port of Coeymans, SUNY	5 years
Prepare for Autonomous Vehicles	Establish an interdisciplinary task force of government and business leaders focused on planning for the integration of self-driving vehicles into Albany County's transportation system. With rapid advances in technology, autonomous vehicles are expected to be a significant component of the transportation and transit systems by 2040 (or sooner). While autonomous vehicles have several potential benefits (e.g., significant reductions in crash injuries and fatalities, increased highway capacity, reduced congestion, more efficient movement of freight, expanded access to seniors and people with disabilities), it is impossible to project the future impacts of a totally automated vehicular system at this time. This interdisciplinary task force should convene regularly (at least twice a year) to develop a plan that quantifies the potential impacts of autonomous vehicles, establishes a coordinated approach to proactively address expected impacts, and identifies key public investments to improve mobility and safety for all residents.	Albany County and CDTC	Local municipalities, CDTA, NYS DOT, trucking industry	2 years

Initiatives	Description	Lead	Partners	Timeline
Goal 4: Transform Albany's Image				
Leverage Major Athletic Events to Showcase Albany County, 'the place'	Continue to provide marketing support to athletic competitions throughout the region like the Aurora Games and the Freihofer's Run for Women and find creative ways to promote the event and connect the competition to Albany County as the <u>place</u> for where these events are happening. Seek opportunities to engage and connect at the human level by featuring local and visiting athletes in internal marketing and communications.	Discover Albany, Albany County	Capital Region Chamber	1 year
Tell the Stories of Women in Business, Innovation, Competition, and Politics	Partner with local marketing and communications organizations to help tell the stories of local women who are not only at the table, but taking the lead in one way or another. Use social media to reach younger audiences with these stories. Partner with the Capital Region Chamber Women's Business Council on efforts to support the business community in enabling female leadership through growing and strengthening diverse peer and mentor networks. This must be done in a genuine way in order to be effective. Marketing and messaging should feature the women being highlighted first, with reference to Albany County or the sponsoring organization, secondary. Use the woman's name in the title, include her photo in the press release, etc.	LDC	Capital Region Chamber WBC, Albany County, Local women's groups and organizations	2 years
Create Excitement for Business and Entrepreneurship in Albany County	Launch a marketing and communications initiative designed to specifically highlight the exciting economic development happenings in Albany County - research and innovation, new business startups, venture capital investments, etc. Seek creative ways to share these stories with local and regional networks beyond the entrepreneurial, business, academic, or economic development community. Employ a variety of digital, traditional, and in-person channels to communicate this message. Use an editorial calendar that schedules content areas around the region's targeted industries, including life sciences, technology, advanced manufacturing, cybersecurity, etc. Aggregate existing content from partners and stakeholders and disseminate to new audiences - <u>internally and externally</u> .	LDC & Discover Albany	Albany County, CEG, Local Colleges & Universities, Local Businesses	3 years
Establish Albany County as a Clean Energy Hub	Create an Albany County Clean Energy Action Plan to identify priority projects and establish Albany County as a leader in the clean energy sector. This action plan should evaluate opportunities in multiple sectors, including, but not limited to: energy efficiency, electric vehicles, renewable energy generation (e.g., solar, wind, small-scale hydroelectric), microgrids, and organic waste diversion. This action plan will provide the roadmap for Albany County and its partners to secure funding and pursue capital projects that reduce the county's carbon footprint, improve air quality, increase efficiency, and improve the resiliency and reliability of the county's electrical grid. This action plan should also be accompanied by several supporting analyses, such as the quantification of current and future electrical energy demand and the identification of suitable sites for renewable energy development that are compatible with existing land uses (i.e., renewable energy development should not compromise agricultural and/or natural resource conservation uses).	Albany County	Local municipalities, LDC, NYSERDA, NYPA, National Grid	10 years