SUPPORTING PRIORITY INVESTMENT

in Somerset County Phase III Study

PREPARED BY: WSP

June 2017

PREPARED FOR: NJTPA

SEAL OF THE COUNTY OF SOMERSET

Disclaimer

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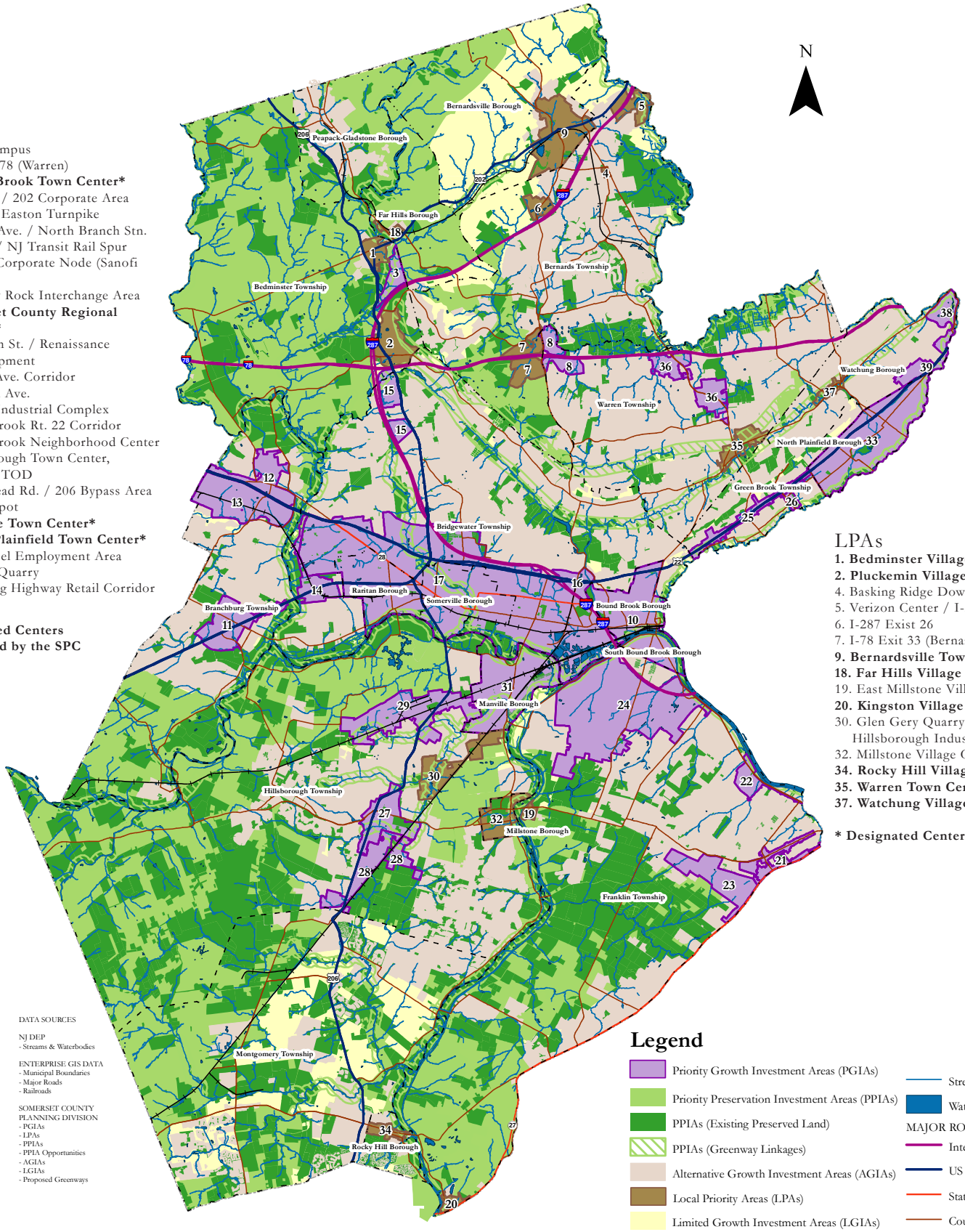
Somerset County, NJ



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33. North Plainfield Town Center*
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37. Watchung Village Center*

*** Designated Centers**

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Prepared by Somerset County Planning Board
April 2014

Executive Summary

First settled at the end of the seventeenth century, Somerset is among the oldest counties in the United States. Over the past half century, Somerset County has experienced significant population growth and transitioned from largely rural and agrarian community to a modern, diversified economy led by the industrial, goods movement, pharmaceutical, and telecommunications sectors.

The Supporting Priority Investment in Somerset County Phase III Study is a collaborative process that identifies and advances opportunities for smart growth and redevelopment through tactical alignment of resources, strategic partnerships, innovative planning strategies, and multimodal infrastructure investment to support growth and job creation and forge a vibrant, sustainable, and resilient future.

Selection of Investment Areas

The *Supporting Priority Investment in Somerset County Initiative* advances and implements the *Somerset County Investment Framework* for regional smart growth to support redevelopment, job creation, and preservation.

A comprehensive community-based planning process was utilized to engage each of the County's municipal partners to examine candidate investment areas. The study team worked closely with stakeholders and decision makers to understand local needs and vision, and evaluate alternative land use and multimodal improvement scenarios.

The *Supporting Priority Investment in Somerset County Phase III Study* advances framework plans for a total of 17 investment areas including 12 Priority Growth Investment Areas (PGIAs) and five Local Priority Areas (LPAs).

These areas represent a broad geographical distribution across Somerset County and feature a diversity of communities, needs, priorities, place types, and opportunities.

The investment areas were examined in geographic focus areas in order to create complementary framework plans, land use scenarios, and multimodal transportation improvements among neighboring municipalities that are consistent with local goals and vision, and leverage each municipality's assets and strengths without contributing to a ratables chase and development patterns inconsistent with the local context and character.

The four geographic focus areas are:

- Somerset Hills
- Route 22 Corridor
- Regional Center
- Millstone Valley

Geographic Focus Areas

Somerset Hills

Northern Somerset County includes two PGIAs with large office complexes, and three LPAs seeking to preserve and enhance their town or village centers.

- **AT&T Campus PGIA:** Located near the interchange of U.S. Route 202/206 and I-287, there is local interest in a vision for reuse of the AT&T corporate office campus and more cohesive connections around the Bedminster town center.
- **Far Hills Village Center LPA:** Small village situated along U.S. Route 202 contains small businesses, residences, and a NJ TRANSIT train station.
- **Bernardsville Town Center LPA:** Historic Bernardsville Town Center has a traditional downtown district, train station access, and more recent highway commercial development.
- **I-78 Exit 33 (East Side) PGIA:** Includes office parks on the east side of the interchange, with a focus on the large Chubb office complex.
- **Watchung Village Center LPA:** Focused on the traffic circle at the junction of three County Roads, the LPA includes a mix of small businesses, parks and historic resources, and residences.

Route 22 Corridor

Three PGIA areas clustered along U.S. Route 22 feature traditional highway-oriented development and seek innovative strategies to attract new development.

- **Meister Avenue / Industrial Parkway PGIA:** Located along the south side of U.S. Route 22, the PGIA is mostly industrial, but also contains a mix of restaurants, office parks, and a NJ TRANSIT train station, adjacent to the RVCC/Easton Turnpike PGIA.
- **Green Brook Route 22 Corridor PGIA:** A narrow commercial corridor, the PGIA includes 324 acres of commercial property on both the north and south sides of U.S. Route 22.
- **North Plainfield Town Center PGIA:** Particular emphasis is on redevelopment opportunities in close proximity to North Plainfield's traditional downtown business district and along U.S. Route 22.

Regional Center

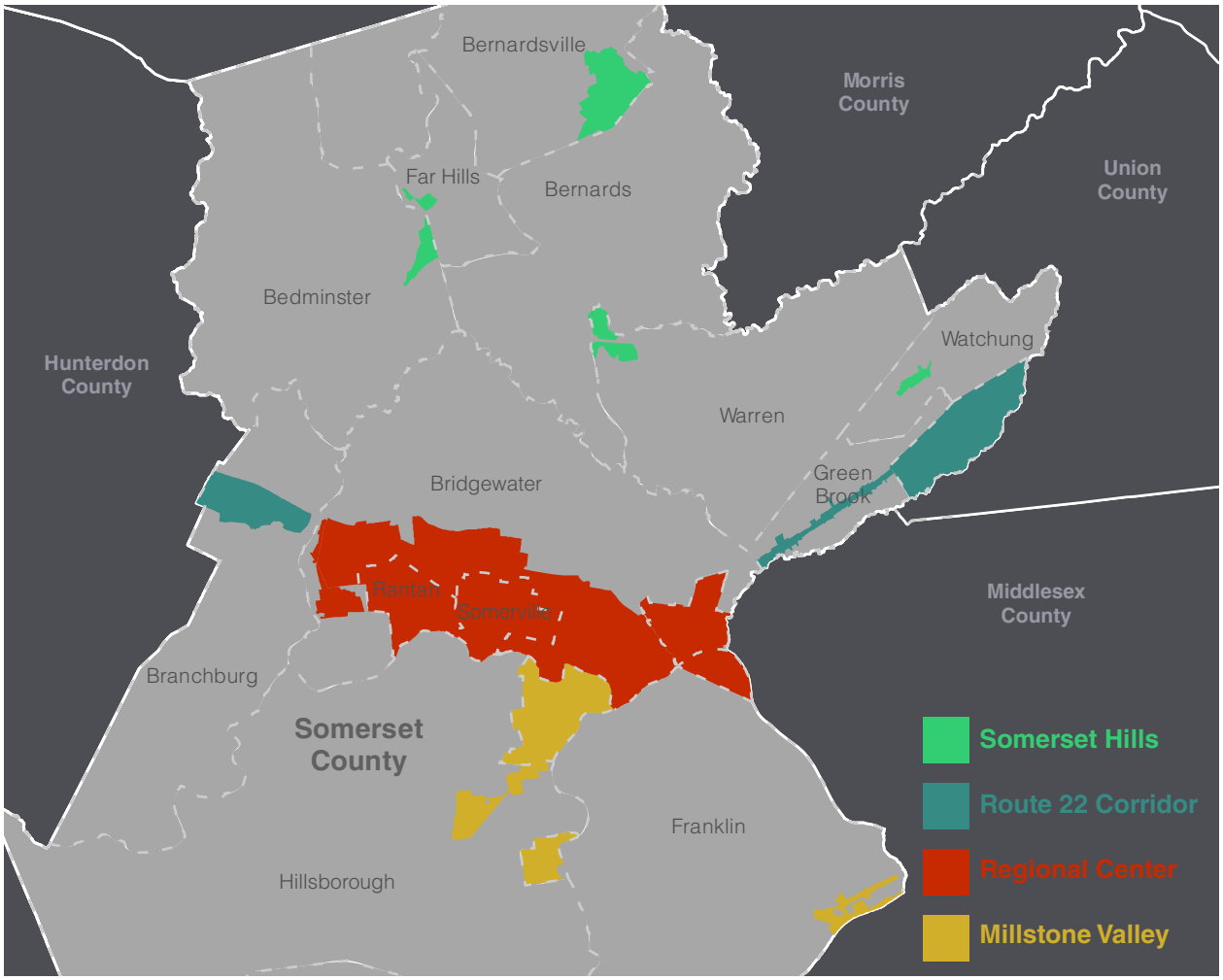
Somerset's urbanized core includes five highly diverse PGIAs with regional rail service, highway access, and traditional downtown business districts.

- **U.S. Route 202 / NJ TRANSIT Rail Spur PGIA:** A narrow commercial corridor between U.S. Routes 22 and 202, the PGIA also contains preserved open space and industrial and residential properties.
- **Regional Center PGIA:** This large PGIA spans much of the County's center across large portions of Bridgewater Township, Somerville Borough, and Raritan Borough. Planning for this PGIA focused on the portions in Raritan and Somerville, for which individual PGIA framework plans were developed.
- **The Bound Brooks PGIA:** Spanning the entirety of the Bound Brooks, includes focus areas with a mix of commercial and residential uses along Talmage Avenue (CR 533) in Bound Brook and Main Street in South Bound Brook.

Millstone Valley

The central portion of Somerset County includes large tracts of farmland and open space; its two LPAs and two PGIAs combine a focus on preservation, strategic redevelopment and multimodal transportation concepts.

- **Glen Gery Quarry / East Hillsborough Industrial LPA:** Located in Hillsborough Township, the LPA includes over 1,700 acres of largely undeveloped land between U.S. Route 206 and Millstone Borough.
- **Millstone Village Center PGIA:** Millstone Village sits at the crossroads of Amwell Road and CR 533 and includes several small businesses, single family homes, preserved open space, and historic resources.
- **Manville Town Center PGIA:** The PGIA includes the entire Borough of Manville and focuses on opportunities to improve mobility, resiliency, and support active transportation and recreation.
- **Hamilton Street / Renaissance Redevelopment PGIA:** A neighborhood commercial district along Hamilton Street (CR 514) in Franklin Township with access to employment, university, and transportation facilities in adjacent New Brunswick.



Map 1: Geographic distribution of investment areas (PGIAs and LPAs)

Environmental Justice

According to the New Jersey Department of Environmental Protection, the purpose of the Environmental Justice (EJ) Assessment is to ensure "the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies ... [and that] no group of people ... should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies." The Federal Executive Order 12898 makes environmental justice a core mission of federally funded projects.

The EJ Assessment is focused primarily on the following demographic characteristics: Low Income, Race/ Minority, and Limited English Proficiency (LEP). U.S. Census data indicate that three Somerset County investment areas contained a higher concentration of populations with EJ characteristics:

- Bound Brooks PGIA
- Hamilton Street / Renaissance Redevelopment PGIA
- North Plainfield Town Center PGIA

The 17 investment areas hold a significant proportion of the County's households with EJ characteristics: 41.7% of the County's households living below the poverty line, 52.9% of the County's minority population, and 68.8% of the County's LEP households.

The EJ Assessment for the *Supporting Priority Investment in Somerset County Phase III Study* finds no disproportionate impacts to the study area PGIAs and LPAs, including the three investment areas with higher concentration of populations with EJ characteristics.

None of the study recommendations create an impact, disproportionate or otherwise, to any of the investment area residents, and there are no adverse environmental or health impacts from any of the recommendations. The study includes only recommendations that enhance mobility and safety; provide traffic calming benefits; and improve transit access, walkability, and bikeability.

Investment Area Assessment

A data-driven analysis supported the development of improvement concepts tailored to the unique needs and context of each investment area. A market assessment provided a snapshot of current data and trends related to demographics, development, and key market sectors. The analysis affords a better understanding of regional demand and future market absorption rates in order to inform the development of viable and sustainable land use scenarios.

An infrastructure assessment included a multimodal transportation analysis, review of access to major utilities, and a preliminary environmental screening. This baseline analysis helps define the strengths, weaknesses, opportunities, and constraints of each investment area, which in turn shaped the framework plan recommendations.

Innovative Planning Strategies

A wide range of creative strategies can be applied at the local level to support the goals of the *Somerset County Investment Framework* and enhance community vitality and resiliency, improve the health

of natural systems, and boost local and regional economies. The emphasis of these strategies is on promoting innovative design approaches that can improve the quality of life for those who live, work, and play in Somerset County. Many of these strategies are incorporated into the framework plans. Three approaches to innovative planning were examined:

- Planning for Resilient Communities
- Building Design and Repurposing Obsolete Buildings and Campuses
- Tools to Promote Smart Growth, Livable, and Sustainable Communities

Planning for Resilient Communities

Community resiliency tools that improve response to uncertainty, natural hazards, and other crises include strategies to promote energy resiliency, green infrastructure, and land use tools that mitigate risks to essential infrastructure and community assets as a result of flooding and other unpredictable hazards.

Building Design and Repurposing Obsolete Buildings and Campuses

Green building design and land use retrofit tools encourage greater energy efficiency and more livable, accessible buildings, including repurposing obsolete, single-use buildings and office campuses as creative mixed-use nodes.

Tools to Promote Smart Growth, Livable, and Sustainable Communities

Smart growth, placemaking, and sustainability tools promote compact, mixed-use, pedestrian-oriented, transit-accessible places to achieve a wide range of community, health, business, and environmental benefits.

Framework Plans

Detailed framework plans were developed for the 17 investment areas based on each area's unique blend of strengths, weaknesses, opportunities, and constraints. Components of the plans include land use recommendations, placemaking strategies, multimodal transportation improvements, innovative planning strategies, and policy recommendations.

The framework plans ask – and begin the process of answering – the key questions that will shape the municipality's future. The framework plans provide a road map for how to achieve the vision through regulatory and policy changes and targeted investment in infrastructure.

Each framework plan includes an implementation matrix of multimodal transportation improvements and actions that includes the time frame for implementation, potential partners, and estimated order-of-magnitude cost.

Study Themes and Findings

The *Supporting Priority Investment in Somerset County Initiat*ive includes a series of overarching themes and findings that are applicable across the County:

- *The Supporting Priority Investment in Somerset County Phase III Study* is a collaborative process to understand and address local needs, goals, and vision, support smart growth and redevelopment opportunities, and encourage private investment and job creation.
- Framework plans of integrated land use, transportation, and placemaking strategies were developed for each investment area. The framework plans

are intended to initiate municipal dialog among elected officials and planning boards that will inform the development of master plan reexaminations reports, zoning changes, overlay zones, and capital improvement plans.

- Comprehensive implementation plans of multimodal transportation and parking improvements are recommended for each investment area to address existing congestion, improve safety and mobility, and mitigate deficiencies. Improved street connectivity and interconnected street grids are essential to accommodate new trips and create walkable communities and main streets.
- Supportive incentives – including regulatory changes, density bonuses, and assistance from local, county, regional and state agency partners – will foster implementation and encourage private investment to implement the framework plans.
- Market-based assessment provides a rigorous, data-driven appraisal of each investment area, comparing land use indicators and market trends to identify viable opportunities. Innovative smart growth planning strategies are integral to the framework plans, such as green infrastructure, Complete Streets, and green building. These strategies provide additional tools to incentivize, facilitate, and achieve sustainable, livable, and economically competitive communities.

Next Steps

The framework plans are intended to initiate municipal dialog that will inform the development of master plan changes and reexamination reports, zoning changes, overlay zones, and capital improvement plans. It is the intention of the *Supporting Priority Investment in Somerset County Initiative* to begin that process.

Framework Plan Recommendations

The Framework Plans include a broad range and mix of multimodal improvement concepts and design tools tailored to support the unique vision and needs of each investment area, such as the examples listed below:

Vehicular
speed reduction, signage, parking

Pedestrian
improved crossings, walkable site design

Recreation
playground access, recreation space

Bicycle
bicycle lanes, paths, shared-lane markings, parking

Connectivity
improved access and network connections

Greenway
stream corridor preservation, trails

Roadway
road diets, gateways, traffic calming, corridor redesign

Streetscape
street furniture, green infrastructure, wayfinding

Transit
stop/station access, TOD opportunities

Introduction

First settled at the end of the seventeenth century, Somerset is among the oldest counties in the United States. Over the past half century, Somerset County has experienced significant population growth and transitioned from largely rural and agrarian to a diversified economy led by the industrial, goods movement, pharmaceutical, and telecommunications sectors. The County's strong transportation network and proximity to major regional markets present an attractive location for residents and businesses alike. Yet despite these significant assets and opportunities, many challenges remain.

The Supporting Priority Investment in Somerset County Phase III Study is a collaborative process that identifies and advances opportunities for smart growth and redevelopment through tactical alignment of resources, strategic partnerships, innovative planning strategies, and multimodal infrastructure investment to support growth and job creation and forge a vibrant, sustainable, and resilient future.

Somerset County has long been recognized for its proactive and collaborative planning program. A series of studies and planning initiatives have supported and advanced Somerset's strategic goals for smart growth and redevelopment, multimodal mobility, economic development and job creation, to forge a sustainable and resilient future:

- In 2010, Somerset County published its *Current Status and Lessons Learned on Redevelopment in Somerset County*, an assessment of need and support for redevelopment across Somerset's 21 municipalities.
- The *Making Connections Circulation Plan*, completed in 2011, advanced integrated transportation and land use methodologies in support of redevelopment, economic growth, and improved mobility.
- In 2014, the County adopted the *Somerset County Investment Framework* and identified Priority Growth Investment Areas (PGIAs) and Local Priority Areas (LPAs) where growth and investment are encouraged and best supported by infrastructure and utilities.
- The 2013 S*upporting Priority Investment in Somerset County Through Access and Mobility Improvements* built upon the *County*

Quick Fact

Somerset is the first New Jersey County to implement New Jersey's Criteria-Based Investment Framework to identify and advance opportunities for smart growth and redevelopment.

Investment Framework and identified seven proposed locations for smart growth and redevelopment, and strategic multimodal transportation improvements.

- Adopted in 2013, the Somerset County Business Partnership's *Investment Somerset – Comprehensive Economic Development Strategy* identified a program of economic development strategies to encourage job creation private-sector investment, and strategic partnering opportunities.
- *Supporting Priority Investment in Somerset County Phase I*, completed in 2015, examined existing conditions, infrastructure, utilities, land use, demographics, and natural resources for each of the PGIAs.
- *Supporting Priority Investment in Somerset County Phase II*, completed in 2015, advanced framework plans of land use alternatives and multimodal transportation improvements for PGIAs in seven Somerset County communities.

The Supporting Priority Investment in Somerset County Phase III Study builds upon the tools, relationships, and methodologies established throughout these and related efforts to examine an additional 17 investment areas - 12 PGIAs and five LPAs. In addition to recommendations for land use and zoning, multimodal mobility, parking and access control, and NJDOT Problem Statements included in the previous studies, the toolbox of supporting strategies has been expanded to include energy and utilities, green infrastructure, sustainability and resiliency, and green building design.

This study presents a comprehensive program for strategic investment, pairing public action and regulatory changes with private investment, and achieving tactical alignment among local study partners, state and regional agencies, and a variety of funding mechanisms. The study documents coordination among the project team, Study Advisory Committee, Somerset County, advocates, stakeholders, and the public to build consensus on achievable goals and objectives, and formulate consensus framework plans.

Hamilton Street PGIA in Franklin

Study Methodology

The overall *Supporting Priority Investment in Somerset County Initiative* is a collaborative process to advance and implement the *Somerset County Investment Framework* for regional smart growth to support redevelopment, job creation, and preservation. The *Phase III Study* includes recommendations for 17 investment areas and was undertaken in three parts:

Part I: Outreach and Data Assembly

- Coordination among public officials, advocates, and stakeholders
- Develop a comprehensive understanding of critical issues, needs, and priorities
- Compile data resources and undertake market-based assessment of development options

Part II: Land Use & Mobility

- Data-driven assessment of 17 investment areas
- Municipal coordination to develop and evaluate alternative growth scenarios
- Comprehensive land use, multimodal transportation, and environmental analysis

Part III: Framework Plans

- Develop comprehensive Framework Plans for each investment area include zoning, access, placemaking, and multimodal transportation improvement recommendations
- Identify supporting strategies including energy and utilities, green building and infrastructure, stormwater mitigation, sustainability and resiliency, and LEED design to support implementation
- Compile Implementation Matrix to summarize the recommended multimodal transportation improvements
- Prepare NJDOT Problem Statements to advance improvement concepts on state highways

Bedminster Hike and Bike Trail, which provides a connection to the AT&T Campus PGIA

The Historic Brooks Arts Center in the Bound Brook PGIA

1 | Outreach

A community-based planning process was developed and implemented to support the technical elements of the Supporting Priority Investment in Somerset County Phase III Study. A comprehensive outreach program helped guide the study effort and build consensus on a program of achievable goals and recommendations.

Outreach took place throughout the course of the study. In addition to ongoing consultation with Somerset County Planning and Engineering staff, Somerset County Planning Board, and North Jersey Transportation Planning Authority (NJTPA), the study included numerous meetings, outreach elements, and opportunities for collaboration and coordination:

- Study Advisory Committee
- Diverse focus groups representation
- Somerset County municipal partners
- State and regional regulatory agencies
- Public, stakeholders, and advocates

Study Advisory Committee (SAC)

Effective Study Advisory Committee engagement is the foundation of the community-based planning process and ensures that the project team understands and addresses local needs, goals, and vision. Members of the SAC group included professionals and staff from various local, county, regional, and statewide agencies and stakeholder groups. SAC members provided input and guidance throughout the study. Please see page 204 for the listing of SAC members.

Four SAC meetings were held to guide the team from goal setting and needs assessment to review and vetting of the framework plans and implementation strategies.

Focus Group Meetings

Focus groups empower stakeholders, advocates, social service providers, decision makers, and business representatives to take a meaningful role in the overall study, and provide a wider range and diversity of input and comment than traditional surveys methods and questionnaires.

A total of four focus group sessions were held with a broad spectrum of professionals, stakeholders, and advocates from Somerset County and across New Jersey including representatives from business and economic development; real estate; social service providers, and resiliency, energy, and sustainability.

Municipal Meetings

Elected officials, professionals, and planning board members were consulted throughout the study to ensure that each municipal partner was actively engaged in developing the framework plans and implementation strategies. Local participation, support, and buy-in are essential elements to successful implementation of the study.

Coordination meetings were held to introduce the study, seek input on goals and objectives, and local needs and issues.

Follow-up meetings were held with each municipal partner to evaluate the

candidate investment areas, discuss local vision and development needs, weigh proposed scenario alternatives, and ultimately achieve consensus on the framework plans and implementation matrix. Feedback and comments were provided in person, via e-mail and telephone conversations, and through official memoranda. A total of more than 40 in-person meetings were held with the 17 municipal partners.

State Agency Coordination

Coordination among local, county and state plans and projects is consistent with the vision and goals of the Statewide Strategic Plan to achieve economic development, job creation, quality-of-life, and sustainability goals. State agencies hold the key to the necessary regulatory review and approvals, and to the funding assistance needed to advance complex redevelopment and infill projects from drawing board to construction.

The mission of the New Jersey Office for Planning Advocacy (OPA) is to coordinate "statewide planning to protect the environment and guide future growth into compact, mixed-use development and redevelopment, … achieve comprehensive, long-term planning; and integrate … regulatory land use decisions at all levels of government and the private sector.

OPA has been consistently supportive of the *Supporting Priority Investment in Somerset County Initiat*ive and Somerset is the first New Jersey county to implement the state's Criteria-Based Investment Framework to identify and advance redevelopment opportunities.

Public Meetings

Public meetings are a critical venue for engaging County residents and stakeholders to ensure that they are kept informed, engaged throughout the study, and afforded ample opportunity to provide feedback and input. Numerous private citizens, planning professionals, and municipal and agency representatives attended the two public meetings, which were held on October 6, 2016 and June 15, 2017.

The meeting formats encouraged open discussion on a wide range of topics that helped guide and inform the investment area assessment and development of framework plans. A diversity of comments and concerns were expressed including:

- Will the team work with local municipalities to understand needs and priorities and develop workable solutions?
- How will the study recommendations translate into local transportation and land use development?
- What type of local commitment is required for participation in the study as a municipal partner?
- Does the study include recommendations for local bicycle and pedestrian safety?

Word cloud illustrating key words and themes that emerged from the various outreach activities

Hamilton Street PGIA in Franklin

2 | Selection of Investment Areas

The Somerset County Investment Framework identified 24 Priority Growth Investment Areas and 15 Local Priority Areas that present opportunities to support smart growth and redevelopment and encourage private investment and job creation. As a continuation of previous planning efforts, the Supporting Priority Investment in Somerset County Phase III Study examines the remaining 17 investment areas that have not been analyzed in other recent studies. The community-based planning process includes input, guidance, and collaboration with the investment area municipal partners.

Methodology

The *Phase III Study* utilized a comprehensive community-based planning process to engage each of the County's municipal partners. Through a series of individual, face-to-face meetings, the project team worked closely with municipal stakeholders to understand local needs and vision, and evaluate alternative land use and multimodal improvement scenarios.

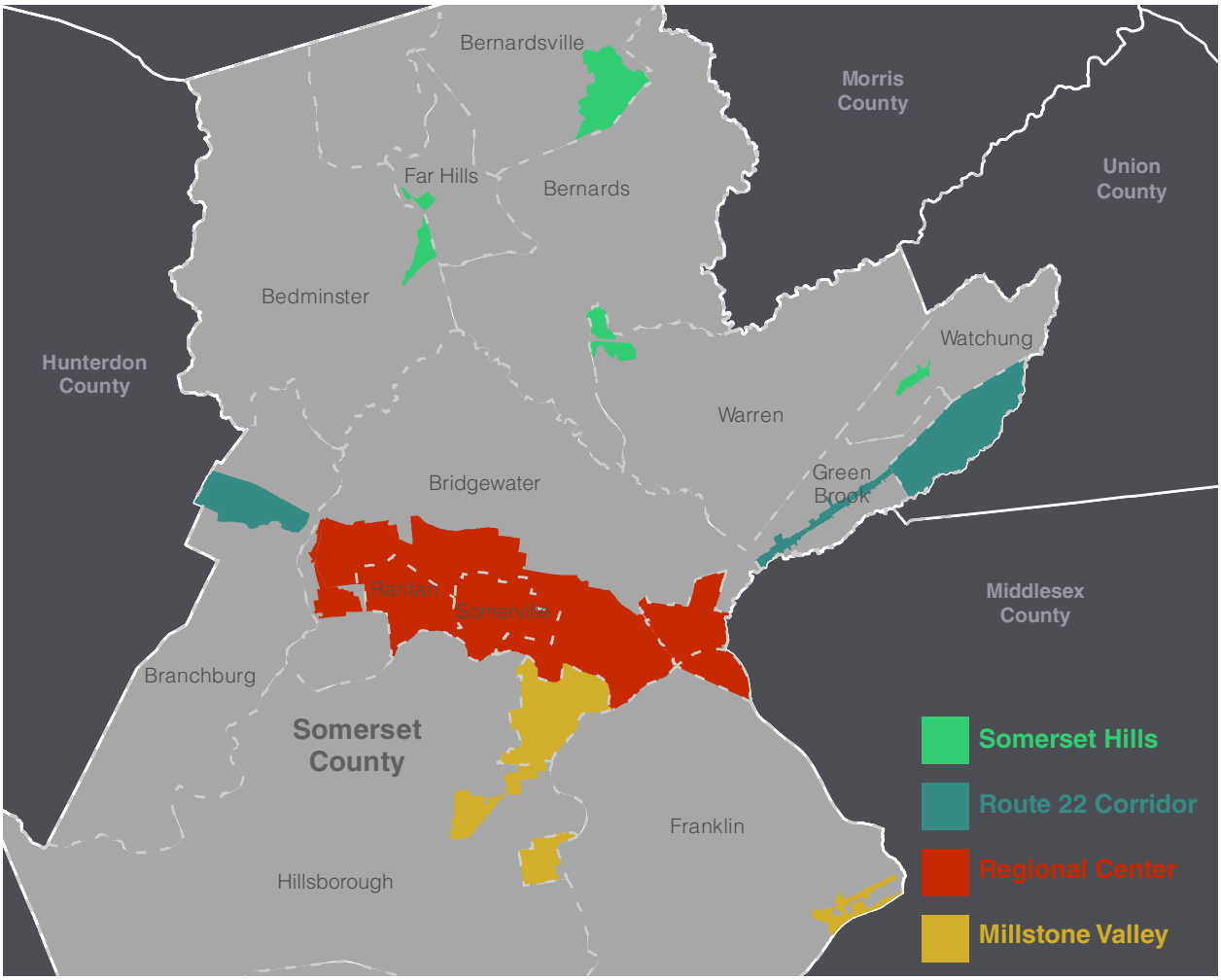
Investment areas were prioritized and incorporated into the study based on three primary factors:

- Strong local interest and support
- Investment areas location has not been recently evaluated in previous *Supporting Priority Investment in Somerset County Initiative* studies
- Redevelopment activity is not already advancing based on private and/or local efforts

Selected Investment Areas

A total of 17 investment areas were selected for detailed study and assessment.

The selected investment areas include 12 PGIAs and five LPAs. While both are focused on leveraging existing infrastructure assets and developing a framework for strategic investment, the two have slightly different objectives. The PGIAs more strongly prioritize smart growth and redevelopment opportunities. The LPAs, in contrast, tend to include smaller towns and village centers, which seek to preserve their historic character and emphasize job retention and community sustainability.

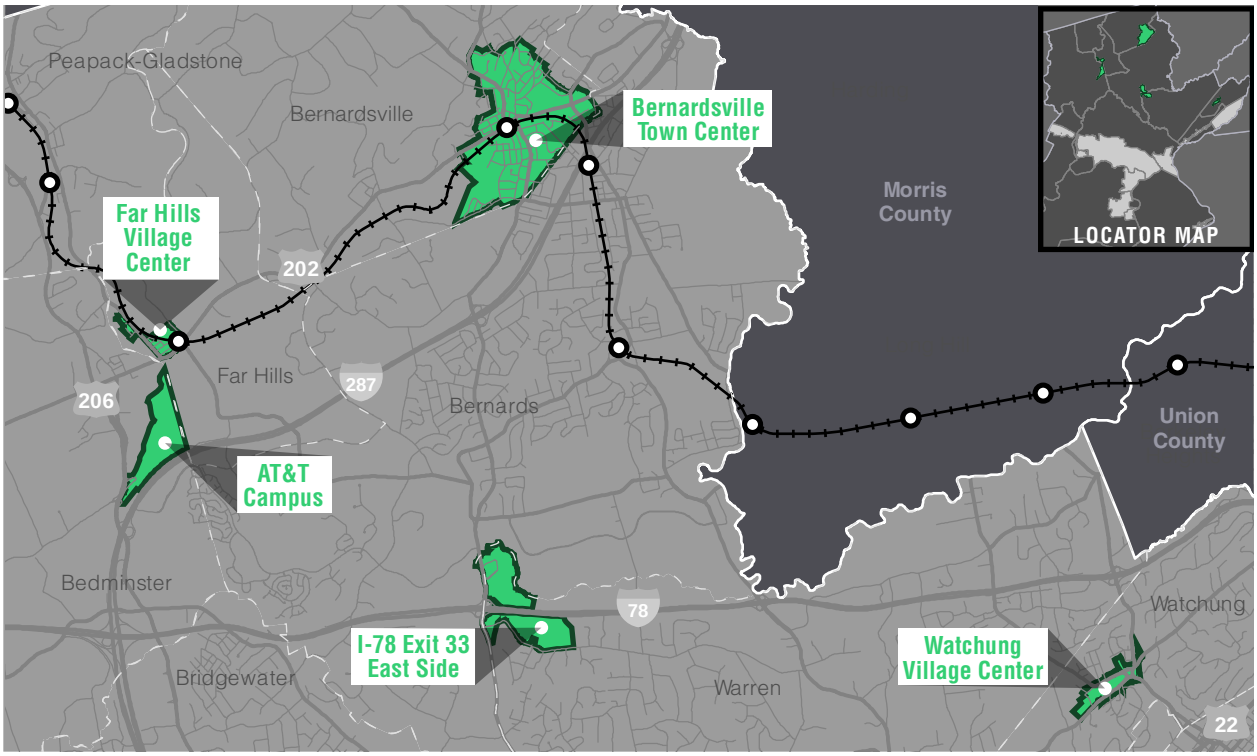


Map 2: Geographic distribution of investment areas (PGIAs and LPAs)

The selected investment areas represent a broad geographical distribution across Somerset County, as shown in Map 2, and have been categorized into four geographic focus areas:

- Somerset Hills
- Route 22 Corridor
- Regional Center
- Millstone Valley

By examining the investment areas in these geographic focus areas, the County seeks to create complementary framework plans and land use scenarios among neighboring municipalities that are consistent with local goals and vision, and leverage each town's assets and strengths without contributing to a ratables chase and development patterns inconsistent with local context and character.



Map 3: Somerset Hills investment areas

Somerset Hills

The Somerset Hills region covers the northern portion of the County. It includes several PGIAs with large office complexes seeking opportunities for future repurposing, as well as several LPAs seeking to preserve and enhance their village centers.

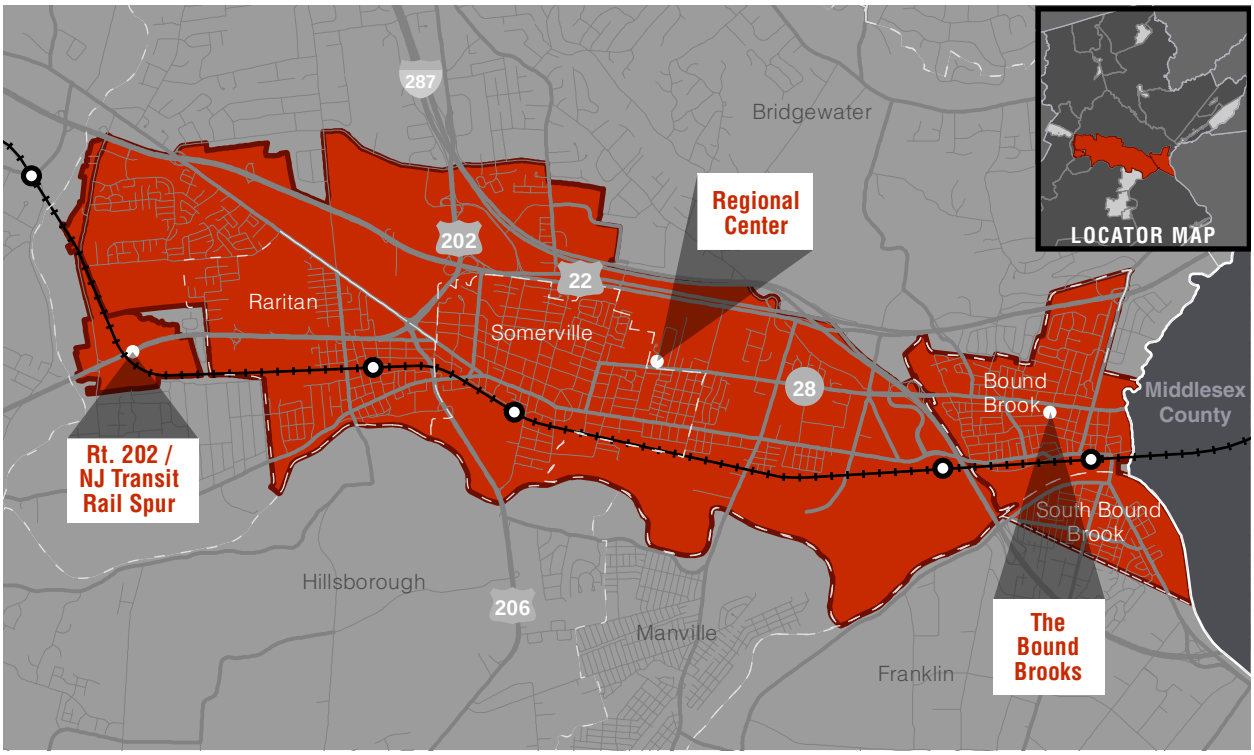
- **AT&T Campus PGIA:** Located near the interchange of U.S. Route 202/206 and I-287 in Bedminster, there is local interest in creating a vision for the future reuse of the AT&T corporate office campus and more cohesive connections and redevelopment around the village center.
- **Far Hills Village Center LPA:** Far Hills is situated along U.S. Route 202 and contains a mix of small businesses, residences, and a NJ TRANSIT train station.
- **Bernardsville Town Center LPA:** The Bernardsville Town Center contains a traditional downtown commercial district and a train station, as well as more recent highway commercial development along the U.S. Route 202 corridor.
- **I-78 Exit 33 (East Side) PGIA:** Located in Warren Township, the PGIA includes several office parks on the east side of the interchange, with a focus on the large Chubb office complex to the southeast.
- **Watchung Village Center LPA:** Focused around the traffic circle at the junction of County Roads 527, 531, and 653, the village includes a mix of small businesses, civic uses, a park and historic resources, and residences.

Map 4: Route 22 Corridor investment areas

Route 22 Corridor

Several investment areas are clustered along the U.S. Route 22 corridor. These PGIAs tend to be characterized by older, highway focused development patterns and seek strategies to attract new development.

- **Meister Avenue / Industrial Parkway PGIA:** Located along the south side of U.S. Route 22, in Branchburg Township, the PGIA is mostly industrial in nature, but also contains a mix of restaurants, office parks, and a NJ TRANSIT train station. The PGIA is adjacent to the RVCC/ Easton Turnpike PGIA, located on the north side of U.S. Route 22, which was evaluated in the *Phase II Study*.
- **Green Brook Route 22 Corridor PGIA:** A narrow commercial corridor in Green Brook, the PGIA includes 324 acres of commercial property on both the north and south sides of U.S. Route 22.
- **North Plainfield Town Center PGIA:** While the PGIA encompasses the entire Borough, particular focus is on redevelopment opportunities in close proximity to North Plainfield's traditional downtown business district and along U.S. Route 22.

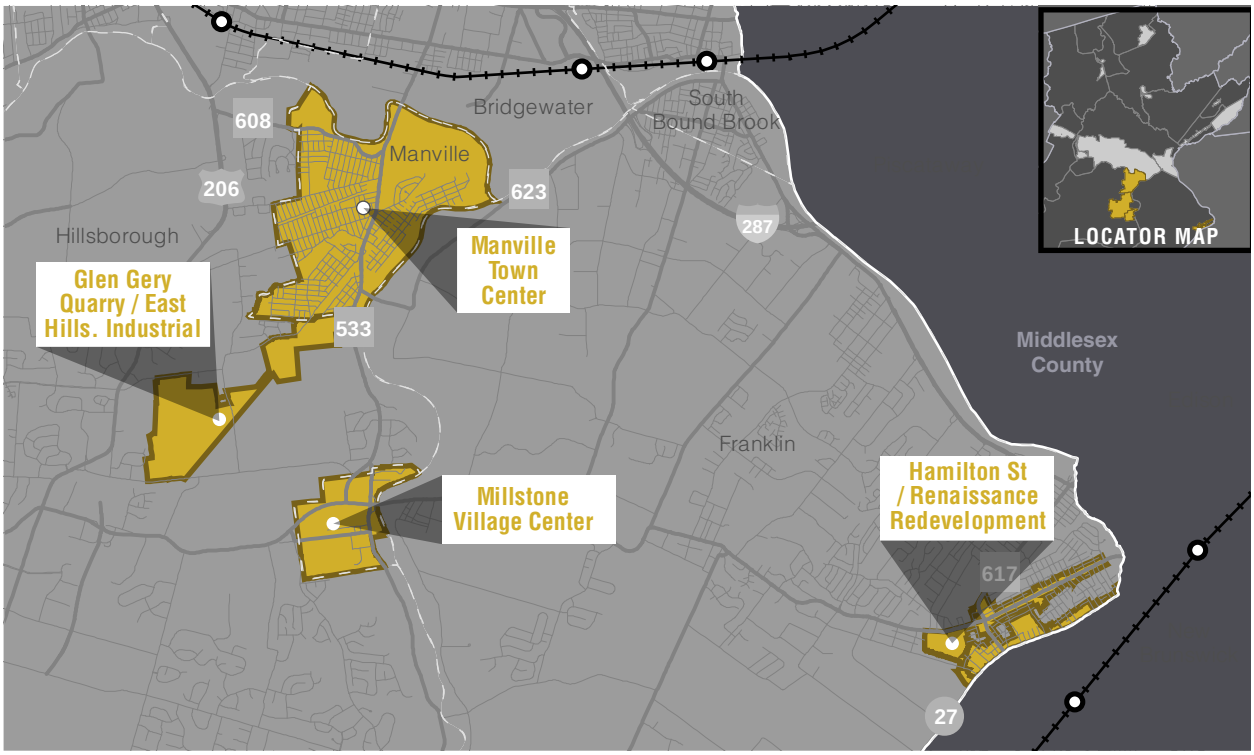


Map 5: Regional Center investment areas

Regional Center

Investment areas in the regional center include several PGIAs with multimodal transportation access and traditional downtown businesses districts.

- **Route 202-NJ TRANSIT Rail Spur PGIA:** A narrow corridor in Bridgewater Township that lies between U.S. Route 22 and U.S. Route 202, the PGIA also contains preserved open space and industrial and residential properties. Bridgewater Town Center is located at the southeast corner of the PGIA.
- **Regional Center PGIA:** This large PGIA spans large portions of Bridgewater Township, Somerville Borough, and Raritan Borough. Planning for this PGIA focused on the portions in Raritan and Somerville, for which individual PGIA framework plans were developed.
  - » **Raritan Borough:** While this portion of the PGIA encompasses the entire Borough of Raritan, particular focus is on areas surrounding the downtown commercial district, NJ TRANSIT station, a portion of U.S. Route 206, and connections to the regional greenways network.
  - » **Somerville Borough:** Similar to Raritan, the PGIA covers the entire Borough of Somerville. The focus is on mobility improvements surrounding the downtown area.
- **The Bound Brooks PGIA:** Spanning the entirety of both Bound Brook and South Bound Brook, focus areas include a mix of commercial and residential uses along Talmage Avenue (CR 533) in Bound Brook and Main Street in South Bound Brook.



Map 6: Millstone Valley investment areas

Millstone Valley

The Millstone Valley captures the central portion of the County. These areas include a focus on preservation of historic and ecological assets and strategic redevelopment opportunities.

- **Glen Gery Quarry / East Hillsborough Industrial LPA:** Located in Hillsborough Township, the LPA includes over 1,700 acres of largely undeveloped land between U.S. Route 206 and Millstone Village, and opportunities for multimodal improvements.
- **Millstone Village Center PGIA:** Millstone Village sits at the crossroads of Amwell Road (CR 514) and Main Street (CR 533) and includes several small businesses, single family homes, preserved open space, and historic resources.
- **Manville Town Center PGIA:** The PGIA includes the entire Borough of Manville, and focuses on opportunities to improve mobility, resiliency, and opportunities for active transportation and recreation.
- **Hamilton Street / Renaissance Redevelopment PGIA:** A neighborhood commercial district along Hamilton Street (CR 514) in Franklin Township with access to employment, university, and transportation facilities in adjacent New Brunswick.

3 | Demographics and Market Assessment

The market assessment updates and expands upon data gathered for the Supporting Priority Investment in Somerset County Phases I and II studies and provides a snapshot of current data and trends related to demographics, development trends, and key market sectors. The analysis also affords a better understanding of regional demand and future market absorption in order to inform the development of viable and sustainable land use scenarios and framework plans.

Methodology and Assessment

The data for Somerset County and its neighbors (Hunterdon, Mercer, Middlesex, Morris, and Union) were summarized individually, supporting a comparative analysis of Somerset's individual strengths and weaknesses both internally and relative to its neighbors.

Demographics

- **Population:** Somerset County population has grown by 4.3 percent (13,772 people) since 2010, faster than the surrounding five counties (3.4 percent). Growth is expected to continue through 2021, but at a slower rate, of 3.5 percent compared to 3.2 percent in the five surrounding counties, 2.9 percent in the NJTPA region, and 2.4 percent in the state as whole.
- **Age:** Somerset County's population is growing older, as the median age increased from 40.2 to 41.3 years between 2010 and 2016, and is expected to increase further to 42.4 by 2021.
- **Households and Income:** Single person households and young family households are increasing within the County, consistent with national and regional trends. Median household income is higher than the surrounding areas in 2016 and forecasted to remain higher through 2021. There has been a relatively strong increase in family households in Somerset County from 2010-2015 (+2,697), consistent with national demographic trends as millennials (19-35 years) are beginning to marry and start families. This trend is expected to continue in the coming years.
- **Employment:** Somerset unemployment has declined steadily since 2010, reaching 4.6 percent in 2015 according to the Average Annual Local Area Unemployment Statistics from the Bureau of Labor and Statistics (BLS), This compares to 5.8 percent overall in New Jersey and 5.5 percent in the NJTPA region. The County's civilian labor force has grown, indicating that the decline in unemployment rate is due to new jobs being added, not just filling replacement jobs.
- **Growth Industries:** According to Bureau of Labor Statistics (2012-2022), Somerset County, growth industries for new jobs are expected to be:

- » Professional & Business Services +8,500
- » Education and Health +5,000
- » Professional, Scientific, Technical +4,600
- » Health Care and Social Assistance +4,300
- » Declining industries include:
- » Manufacturing (-1,200)
- » Government (-600)

New Development

- In the past four years, new development County-wide aggregates 672 development submissions of all types, including: 1,200 residential lots, 2,800 multi-family units, 2 million square feet of commercial (retail) space and over 2.3 million square feet of industrial space. Franklin (2.6 million square feet total for all types) has been the recipient of more than half of these.

Housing Sector

- **Homeownership:** Homeownership rates are higher than in any of the surrounding areas, both historically and forecast through 2021.
- **Housing Affordability:** In Somerset County, 43,500 households (38 percent) spend more than 30 percent of income on housing costs. In the rental market, low vacancy rates indicate a shortage in overall rental housing supply, driving up rents.
- **Multi-family housing and rental market trends:** Relative to the Central New Jersey Apartment Submarket, apartment rentals are more expensive in Somerset County. Newly constructed units generally have higher rents in Somerset County (mean of $2,215 compared to $1,486 overall). The vacancy rate for rental units was 3.6 percent in the first quarter of 2016. Forecasts for 202 show that the vacancy rate will continue to be very low over the next five years.
- **Residential Market (home values):** According to Zillow the residential median sale price per unit is higher in Somerset County when compared to the state and the nation. As of July 2016, the average sale price for homes within Somerset County was $329,000 ($271,000 for NJ, $194,000 for the nation).

Office Sector

- **Vacancies and Rents:** With more than 19 million square feet of leasable office space at least 10,000 square feet in size (including class A, B, and C office space), Somerset County's office submarket represents 23.9 percent of the Central New Jersey Region's office space. In the first quarter of 2016, the office vacancy rate for the County (19.5 percent) was higher than that of the region (15.5 percent) as a whole. Vacancy rates are projected to fall to 18 percent by 2020.

Industrial Sector

- **Vacancies and Rents:** In early 2016, Somerset County had 27.3 million square feet of industrial space with an overall vacancy rate of 4.2 percent, which is 1.5 percentage points lower than New Jersey, and lowest among the surrounding five counties.

Retail Sector

- **Vacancies and Rents:** There are more than 8.3 million square feet of rentable retail space in Somerset County. As of early 2016, the vacancy rate was just over 5 percent. Somerset County is the only county in region with positive absorption in the retail market.

4 | Infrastructure Assessment

The infrastructure assessment provides a baseline assessment of the transportation and infrastructure systems servicing each of the investment areas. The assessment includes a multimodal transportation analysis, review of access to major utilities, and a preliminary environmental screening. Key assets were identified at each investment area, as well as safety issues, access and mobility constraints, physical barriers to circulation, and other deficiencies. These findings formed the basis of the strengths, weaknesses, opportunities, and constraints analysis for each investment area, which in turn drove the framework plan recommendations.

Methodology and Assessment

Roadway and Vehicular Access

The project team identified the primary roadways providing access to and within the investment areas, and assessed vehicular circulation and access issues, barriers, and constraints. Available traffic volume data for key roadways were gathered from NJDOT and the County.

Traffic Capacity Analysis

The traffic capacity analysis provides information on current traffic operations within the investment areas. Intersections with poor level-of-service (LOS) indicate potential constraints to future growth without roadway improvements, while an existing satisfactory LOS indicates potential sufficient existing capacity to accommodate growth.

Where existing data and Synchro microsimulation models were available, the project team conducted a capacity analysis for the major intersections within the investment areas. Traffic data for each location was adjusted to reflect the 2016 base year, and LOS and delay was calculated for each intersection.

Crash History

The project team evaluated NJDOT crash data obtained through Plan4Safety for the most recent three-year period, 2012-2014. Data were evaluated for each investment area as a whole, as well as along the major roadways within each investment area (state and county roadways). Crashes were mapped to identify crash locations and significant crash clusters. Key crash characteristics were tabulated and over-representations noted along individual corridors. For state roadways, data on crash rates were also obtained and compared to statewide averages.

The NJTPA also utilizes a Local Safety Program Network Screening tool to prioritize investments from Highway Safety Improvement Program (HSIP) funding. The screening identifies the top intersections and corridors with safety issues within each county. The project team identified any locations on NJTPA's priority lists that are also within the selected investment areas.

NJDOT Management Systems Data

The project team obtained NJDOT management systems data for congestion, pavement and drainage along state highways within each of the investment areas. The data were tabulated to identify known issues or problem areas within the investment areas.

Public Transportation Access

Access to public transportation, be it rail, bus, or shuttle, provides a vital alternative to driving for residents, workers, visitors, and customers. It reduces the strain on the roadway network, provides a transportation option for those who do not own a car, and helps support more livable, compact, and diverse communities. Public transportation access to each investment area was documented in the *Supporting Priority Investment in Somerset County Phase I Study*. The project team utilized this information, as well as recent GIS transit route data, to summarize public transportation access.

The project team also developed a scoring methodology to quantify access to transit services. The transit access score was based on the percentage of each investment area within a certain distance from bus and rail services. Weights were applied to give greater emphasis to rail access and higher frequency bus service. The scores were scaled from 0 - 1, where a 1 would have full access to both rail and bus services across the entire investment area.

Pedestrian Access

Well-connected street networks offer more route options for pedestrians to reach more places in shorter distances, increasing the convenience of walking, and providing greater opportunities for multimodal travel and mobility. The investment areas were analyzed for three measures of walkability: Census Block Density, Intersection Density, and Network Walking Reach. These three metrics assess street network connectivity in order to measure walkability. Because distance is a key component of walkability, the three measures used account for the spatial allocation of connections.

Bicycle Access

Safe and accessible bicycle mobility is more than just recreation, it can be a viable and sustainable mode of transportation that mitigates traffic congestion and provides environmental, health, and quality of life benefits. Bicycle travel is often a faster, safer, and more efficient mode of travel for many short local trips that can also mitigate costly infrastructure and parking costs.

Bicycle access to each investment area was analyzed from the perspective of traffic stress along the primary roadways in the vicinity of each the investment area. Bicycle Level of Traffic Stress (LTS) measures a cyclist's comfort level given the current conditions of the roadway. Different cyclists have different tolerances for stress created by the volume, speed, and proximity of automobile traffic. The LTS metric is based on the Dutch concept of low-stress bicycle facilities. In general, lower stress facilities have increased separation between cyclists and vehicular traffic and/or have lower speeds and lower traffic volumes. These roadways are more accessible for less experienced cyclists, the typical adult cyclist, families, and children. Higher stress environments generally involve cyclists riding in close proximity to traffic, multi-lane roadways, and higher speeds or traffic volumes.

Utility Infrastructure

Access to adequate utility services – electric, gas, water and sewer service – is essential to accommodating new development. Additional utilities including high quality fiber optics, internet, and broad-band communications are no longer just amenities, but rather key elements that drive the 21st century information-based economy. The assessment of utility infrastructure available at each investment area was documented in the *Supporting Priority Investment in Somerset County Phase I Study*. Utility infrastructure information for LPAs was not available in the *Phase I Study* and has been updated in this report. The project team utilized this information to summarize existing utility infrastructure in each investment area.

Environmental Constraints

Environmental issues can preclude or significantly increase the costs of redevelopment opportunities. To identify potential constraints, the project team conducted a preliminary environmental screening utilizing data from the New Jersey Department of Environmental Protection (NJDEP) and GIS analysis. The screening included the following factors: known contaminated sites, critical environmental and historic sites, category one waters, streams, Delaware and Raritan Canal Commission (DRCC) Review Zones, groundwater contamination areas (classification exception area (CEA) & currently known extent (CKE)), cultural sites and resources, open space and wetlands.

Flood Hazard and Impervious Cover

Related to the environmental screening, a review of flood hazard information and impervious surface data can identify potential constraints to development and opportunities or needs to integrate green infrastructure and low impact development concepts into the framework plans. For each investment area, the project team used the Federal Emergency Management Administration's (FEMA) flood zone GIS data to identify portions of the investment areas within 1% and 0.2% flood risk zones. The team also used impervious surface data available from the NJDEP's land cover GIS data to identify approximately how much of the surface area within each investment area has impervious cover.

Solar array at Duke Farms in Hillsborough

5 | Innovative Planning Strategies

A wide range of innovative planning strategies can be applied at the local level to support the goals of the County Framework and enhance community vitality and resiliency, improve the health of natural systems, and boost local and regional economies. The emphasis of these strategies is on promoting innovative design approaches that can improve the quality of life for those who live, work, and play in Somerset County. Specific approaches explored in this chapter include planning for resilient communities; green building design and repurposing strategies; and smart growth tools.

Planning for Resilient Communities

Community resiliency tools improve the response to uncertainty, natural hazards, and other crises. These include strategies to promote energy resiliency and green infrastructure, as well as land use tools that mitigate risks to essential infrastructure and community assets as a result of flooding and other unpredictable hazards.

Integrating resiliency tools within planning strengthens the ability of communities to deal with change, uncertainty, and crisis. Such tools include green infrastructure practices, a wide range of approaches to energy efficiency and redundancy, and various strategies to ensure the continued operation of key community assets during hazard events.

Resiliency as a planning and policy concept goes beyond these important functions to include reliance on locally available resources and natural systems, and provide for enhanced social equity.

The core principles of resilient design include:[1]

1. Resilience transcends geographic and time scales.
2. Resilient systems provide for basic human needs.
3. Diverse and redundant systems
4. Simple, passive, and flexible systems are more resilient.
5. Strategies that increase durability enhance resilience.
6. Locally available, renewable, or reclaimed resources
7. Resilience anticipates interruptions and a dynamic future.
8. Natural systems have evolved to achieve resilience
9. Social equity and community contribute to resilience.
10. Resilience is not absolute.

[1] *Adapted from The Resilient Design Principles, Resilient Design Institute, http://www.resilientdesign.org/the-resilient-design-principles/*

Building Design and Repurposing Obsolete Buildings and Campuses

Green building design and land use retrofit practices encourage greater energy efficiency and more livable, accessible buildings, including repurposing obsolete, single-use buildings and office campuses as creative mixed-use nodes of work, place, and leisure.

Compared to buildings utilizing today's innovative technologies and techniques, conventional buildings use large amounts of energy, land, water, and raw materials for their construction, operation, and maintenance. They are responsible for large greenhouse gas (GHG) emissions and other harmful air pollutants, generate large amounts of demolition and construction waste, and have serious impacts on plants and wildlife. Conventional buildings and commercial campuses also tend to be single-use buildings rather than integrated mixed-use places.

The beginning of the twenty-first century has ushered in the era of green buildings and land use retrofit to reinvigorate older buildings and promote more sustainable development practices. In contrast to conventional buildings and construction methods, green buildings seek to use land and energy efficiently, conserve water and other resources, improve indoor and outdoor air quality, and increase the use of recycled and renewable materials. While green buildings constitute a small subset of the existing building stock, their numbers are increasing rapidly.

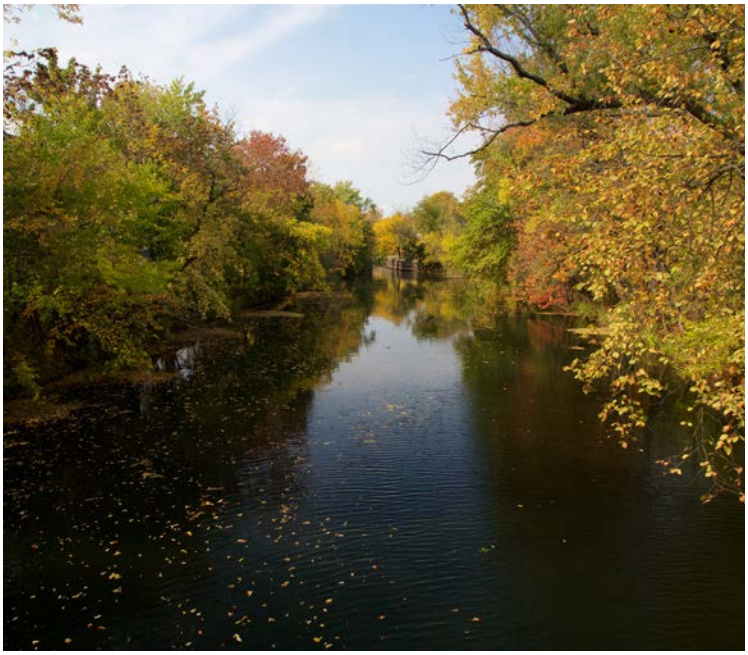
Tools to Promote Smart Growth

Smart Growth, placemaking, and sustainability promote the development of compact, mixed-use, pedestrian-oriented, transit-accessible places to achieve a wide range of community, health, business, and environmental benefits.

Smart growth tools encourage mixed-use development, compact design, transit-supportive densities, a range of housing opportunities, walkable neighborhoods, and an inviting and engaging public realm. Creative, smart growth inspired zoning practices also include policies that direct growth to areas with existing infrastructure and that provide predictable review and approval procedures that support investment. The results of such strategies are healthier, more livable, and more sustainable communities that integrate and facilitate active transportation into daily life and provide a wide range of opportunities for working, living, and recreating. Smart growth and sustainability planning tools also reduce the environmental impacts of development and support the economic and cultural vitality of places, people, and businesses.

(Clockwise from top)

Innovative planning strategies can be applied in investment areas throughout the County to support green infrastructure and resiliency planning (e.g., Manville PGIA); smart growth around transit facilities (e.g., Bernardsville Town Center LPA); enhanced access and connections between the community and river or other natural resources (e.g., the Bound Brooks PGIA); and/or vibrant villages and downtowns, placemaking, and Complete Steets (e.g., Regional Center PGIA - Somerville)



6 | Investment Area Framework Plans

The Supporting Priority Investment in Somerset County Phase III Study is a community-based planning process to develop framework plans for each of the 17 investment areas examined in this study. The framework plans are intended to initiate municipal dialog that will inform the development of master plan reexamination reports, zoning changes, overlay zones, and capital improvement plans. It is the intention of the Supporting Priority Investment in Somerset County Initiative to begin that process. Somerset County will partner with the investment area municipalities to assist in advancing these recommendations.

Methodology

The community-based planning process begins with gathering input, guidance, and direction from the diverse assembly of stakeholders to establish goals, objectives, and community vision for each investment area. This input was filtered through the data resources assembled to support the study including the capacity building initiative; market analysis; and demographics, multimodal mobility, infrastructure, and environmental assessment.

Together these resources and guidance were used to assemble a comprehensive understanding of development needs, opportunities, and market-driven realities for Somerset County, the surrounding region, and each of the investment areas and their host municipalities.

Key Themes

The *Supporting Priority Investment in Somerset County Initiat*ive and framework plans include several overarching themes that are applicable across the County:

- *The Supporting Priority Investment in Somerset County Phase III Study* is a collaborative process to understand and address local needs, goals, and vision, support smart growth and redevelopment opportunities, and encourage private investment and job creation.
- Market-based assessment provides a rigorous, data-driven appraisal of each investment area, comparing land use indicators and market trends to identify viable opportunities.
- Framework plans of integrated land use, transportation, and placemaking strategies were developed for each investment area. The framework plans are intended to initiate municipal dialog among elected officials and planning boards that will inform the development of master plan reexaminations reports, zoning changes, overlay zones, and capital improvement plans.
- Comprehensive implementation plans of multimodal transportation and parking improvements are recommended for each investment area to address existing congestion,

mobility, and access deficiencies. Improved street connectivity and interconnected street grids are essential to accommodate new trips and create walkable communities and main streets.

- Supportive incentives where needed – including regulatory changes, density bonuses, and assistance from local, county, regional and state agency partners – will foster implementation and encourage private investment to implement the framework plans.
- Innovative planning strategies – such as green infrastructure, Complete Streets, and green building design – provide additional tools to incentivize, facilitate, and achieve sustainable, livable, and economically competitive communities.

Framework Plans

The resulting framework plans include a program of land use recommendations, placemaking strategies, multimodal transportation improvements, innovative planning strategies, and policy recommendations to achieve implementation based on each investment area's unique blend of assets, opportunities, and constraints.

Each framework plan includes a high-level summary of the investment area; an assessment of its strengths, weaknesses, opportunities, and constraints. Several are focused solely on mobility improvements but the majority include a series of land use recommendations and redevelopment scenarios. An implementation matrix summarizes the multimodal recommendations, including an order-of-magnitude cost, timeframe, and potential partners.

The outcomes will inform the development of master plan reexaminations reports, zoning changes, overlay zones, and capital improvements. Ultimately the responsibility for local zoning, land use decision-making, and infrastructure lies in the hands of each municipality. It is the intention of the *Supporting Priority Investment in Somerset County Initiat*ive to begin that process. The following pages present framework plans for each investment area described in Chapter 2, and are grouped into four geographic focus areas:

- Somerset Hills
- Route 22 Corridor
- Regional Center
- Millstone Valley

Multimodal Access Metrics

The transit access score is a Geographic Information System-based (GIS) analysis that quantifies how much of an investment area is served by transit. The analysis includes a one-mile radius around train stations and weekday-only commuter bus services, and a one-quarter mile radius around other bus and County shuttle services. For frequent services (rail, regional bus) were given a greater weighting than less frequent services (commuter bus, county shuttle).

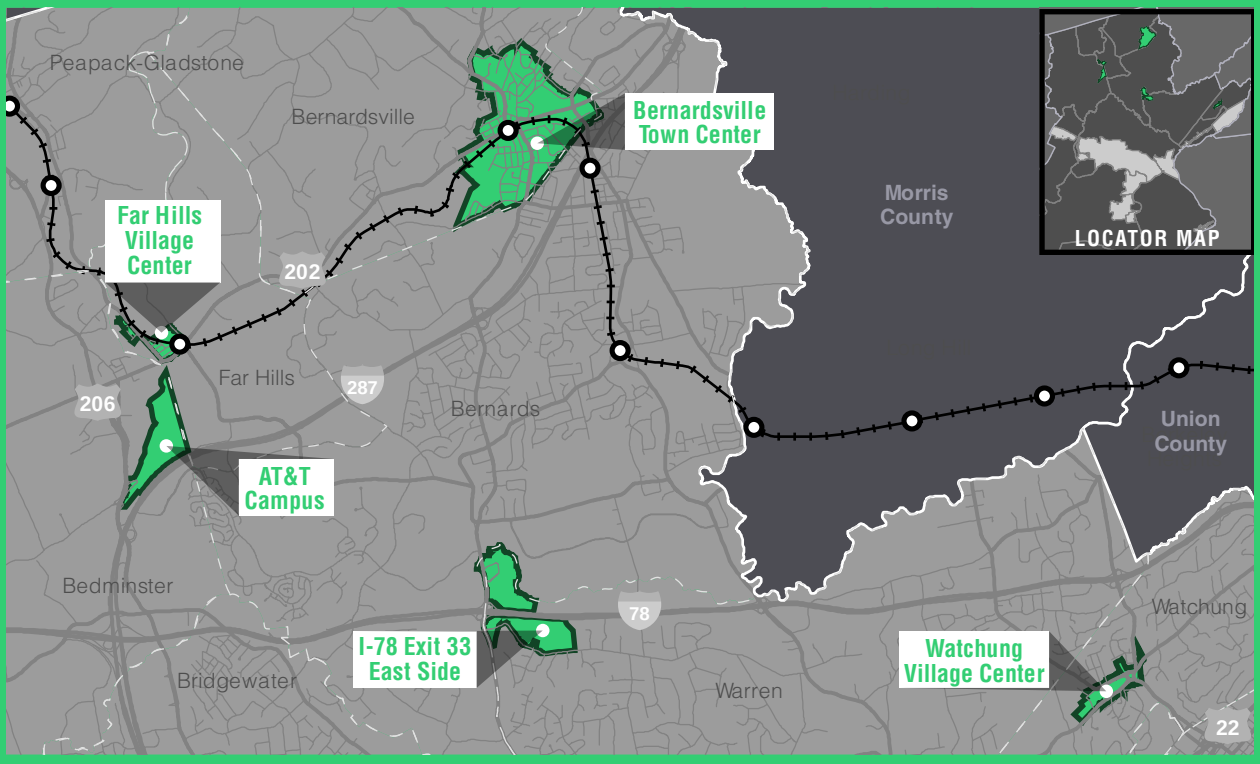
Network walking reach is a GIS-based analysis that examines the connectivity of the roadway network, excluding roadways where pedestrians are prohibited (e.g., interstates). A less connected street network reduces the ability of a pedestrian to access other areas of the network on a one-quarter mile walk.

Scores were normalized and categorized:

Score	Transit Service	Walkability
0.00 - 0.25	Limited	Not
0.26 - 0.50	Moderate	Slightly
0.51 - 0.75	Good	Walkable
0.76 - 1.00	Excellent	Very

Somerset Hills

Framework Plans



AT&T CAMPUS

Description

Location / Bedminster Township, NJ

Principal Roadways / U.S. Routes 202 and 206, AT&T Way

Acreage / 194

Existing Uses / Office, Open Space

Current Zoning / Office/Research (OR)

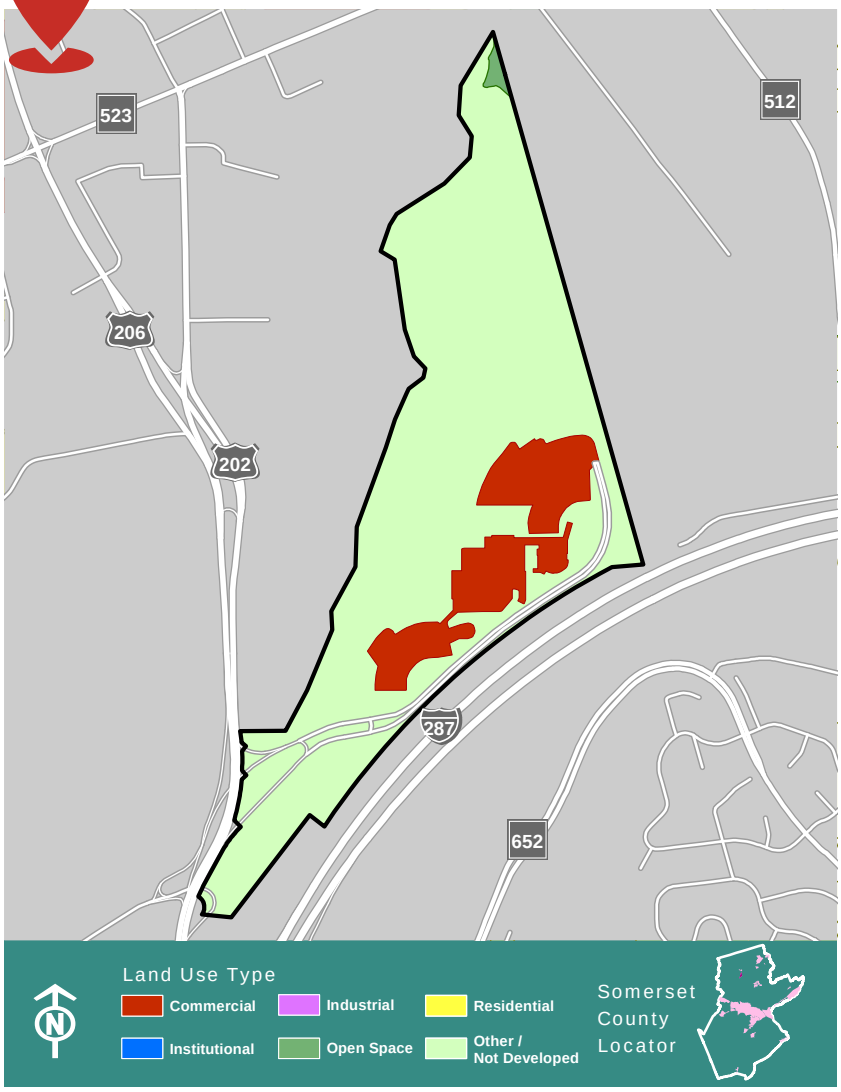
Complete Streets Policy / Yes

PGIA Summary

The PGIA encompasses the AT&T corporate campus property, which is presently owned by MetLife. Access to the property represents a major constraint. Although Routes 202/206, and 287 provide general access to the vicinity of the site, the actual entrance is constrained by the North Branch of the Raritan River and Route 287 on the north and south sides, leaving only a single access point via AT&T Way.

The result is an isolated campus site, though its proximity to Bedminster Village Center, Liberty Corner Road, and the Far Hills train station provide potential opportunities for future connections and redevelopment options. AT&T Campus reuse prospects include continued tenancy as a single-user campus, multiple office tenants, or mixed-use (potentially including residential).

PGIA Map



Multi-Modal Access Metrics

Transit Access

MODERATE TRANSIT SERVICE

Network Walking Reach

NOT WALKABLE

Access Summary

Multimodal access assessment was performed for the AT&T Campus PGIA; metrics indicate an autocentric environment at the AT&T Campus. The PGIA has no existing NJ TRANSIT bus service; the Far Hills train station is within one mile of the PGIA. Somerset County's SCOOT shuttle provides service to the PGIA. The PGIA is not walkable due to a very low density of the internal roadway network and limited street connectivity. A detailed analysis of the transportation infrastructure can be found in the Existing Conditions Technical Memorandum.

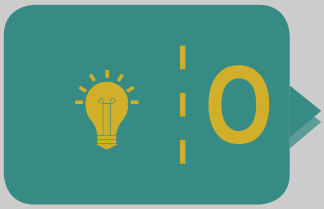
Investment Area Overview

Strengths

- Adjacent to I-287 and regional highway network
- Access to local and regional trails and open space
- Proximate to local communities and desirable quality of life
- Bedminster has a Complete Streets policy
- Regional multiuser trails provide access to adjacent communities including The Hills.

Weaknesses

- Site access limited to a single gate-controlled, access drive
- AT&T Campus PGIA is not walkable and lacks internal pedestrian and bicycle connections
- Only one major roadway serving the PGIA is U.S. 202/206
- Limited transit connections between local destinations and nearby Far Hills transit station (i.e., last mile connections)



Opportunities

- Availability of undeveloped land is an opportunity for new development
- NJ TRANSIT Far Hills Train Station within one mile of the PGIA
- Expand regional trail system
- Bedminster Village Center presents opportunities for compact development and infill options

Constraints

- Lack of road network and street connectivity
- North Branch Raritan River and preserved and sensitive lands create physical barriers and constraints to expansion
- Incomplete interchange configuration and missing moves at I-287 interchange ramps and U.S. 202/206 intersections
- Wide and high-speed U.S. 202/206 roadway cross section north of I-287 incompatible with local village center context

Land Use and Planning Scenarios

While the PGIA itself consists solely of the AT&T corporate campus property, Bedminster Township expanded the study area to also examine redevelopment opportunities surrounding Bedminster Village Center. Although these two focus areas have similar contexts and constraints, and both leverage Bedminster's access to regional transportation networks and amenities, they present substantially different opportunities to revitalize Township development sites and corridors.

Focus Area 1: AT&T Corporate Site

The AT&T corporate campus (Block 43, Lot 1), consisting of approximately 195 acres, is located within the OR Office Research zone and is not fully built out per the zone standards. Existing development is concentrated in the southern portion of the property, which is closer to the entrance via U.S. Route 202/206. The northern portion of the site was previously known as AT&T Moorland Farm and is now utilized as a portion of the Far Hills Race Meeting property, though it remains under common ownership with the southern portion of the property. Environmentally sensitive wetlands and stream corridors provide a natural demarcation between the northern and southern portions of the site.

Three scenarios examine the potential re-use, expansion, or re-zoning of the AT&T site. Each scenario concentrates site buildout in the southern portion of the property, though the full property is used for determining maximum buildout calculations. In all scenarios, the existing environmentally sensitive lands and open space would remain undeveloped.

All three scenarios seek to disassociate from the isolated, single-use design which has generally fallen out of favor among corporate users and brokers. Taking the site's environmental and access constraints into account, any redevelopment should focus on providing a more pedestrian-friendly development pattern via an enhanced street grid and minimization of large surface parking areas using structured parking techniques.

Aerial view of the AT&T Campus area

Scenario 1
Existing Zoning

The first scenario aligns with the existing OR zoning and anticipates re-use of the existing AT&T building and additional development as part of a multi-tenant office complex with some retail and service commercial. Approximately 1.4 million square feet could be built out across the site, including retail/restaurants to serve tenants. The existing AT&T development is built out to approximately 900,000 square feet. This scenario may reduce traffic and access issues by providing services for employees and visitors on the site itself.

Scenario 1: Existing Zoning
- 62,746 sf retail/service
- 1,331,610 sf office/lab
- Parking req: 1,165,509 sf (4,842 spaces)
- 793,178 sf building footprint
- Maximum impervious coverage: 25%
- Site FAR: 0.165

Scenario 2
Mixed Use Campus Option A

The second scenario considers permitting a mix of land uses (i.e., office, retail/service, hotel residential) to take advantage of the size of the property and support on-site employees, visitors, and residents. These assume partial or full demolition of existing office structures. In this scenario, office space is reduced to 600,000 square feet, with nearly 130,000 square feet of retail, a 200-unit hotel, and 200 multifamily residential units added to the site. This scenario may reduce traffic and access issues by providing services for employees and visitors on the site itself.

Scenario 2: Mixed Use Campus Option A
- 600,000 sf office
- 260,000 sf residential (200 units)
- 220,000 sf hotel / 126,760 sf retail
- Parking req: 684,800 sf (3,040 spaces)
- 507,038 sf building footprint
- Maximum impervious coverage: 25%
- Site FAR (w/o hotel): 0.15

Scenario 3
Mixed Use Campus Option B

The third scenario increases development intensity, including a training/conference and potential entertainment focus to create a more varied and self-supporting site plan model.

This program includes 900,000 square feet of office space, with 190,000 square feet of retail, a 300-unit hotel, and 350 multifamily residential units. This greater diversity of uses will support on-site activities for employees and visitors, and cater to residents and hotel/extended stay customers by providing targeted retail, dining, and active recreation and entertainment options. Enhanced land use and redevelopment options include residential, entertainment, health, and wellness to create a 24/7 location, as opposed to the traditional office-only campus, which sits vacant outside of the typical weekday working hours.

Scenario 3: Mixed Use Campus Option B
- 900,000 sf office
- 454,906 sf residential (350 units)
- 330,000 sf hotel
- 190,139 sf retail
- Parking req: 120,3154 sf (4,660 spaces)
- 507,038 sf building footprint
- Maximum impervious coverage: 25%
- Site FAR: 0.15

On-site services for employees and visitors may reduce traffic and access issues. However, the site itself is likely dependent on enhanced connections to the east and Bedminster Village Center to fully optimize the mixed-use potential.

Focus Area 2: Bedminster Village Center

There is also potential for redevelopment elsewhere along the U.S. Route 206 and Lamington Road corridors, including the Mallinckrodt and Advance Realty sites, which still operate as traditional office properties. These sites are at the gateway to Bedminster Village Center from the south. The two sites are directly opposite each other along U.S. 206 (the Mallinckrodt site to the west and the Advance site to the east), but with limited linkages to each other and the surrounding Township as a whole.

Three larger-scale scenarios consider both the office properties and the roadway corridors within the overall context of the surrounding Bedminster Village Center area. Each scenario should promote better connectivity between the Advance and Mallinckrodt sites, as well as a series of roadway, pedestrian, streetscape, and traffic calming improvements to enhance safety and mobility in the Village area. Two distinct but supporting corridors are envisioned.

Aerial view of the Bedminster Village Center focus area

Scenario 1

Existing Zoning

The 23-acre Mallinckrodt site is located in the OR Office-Research zone, though it appears to pre-date the current zoning standards. As such, the existing development is nearly twice as large as what would be permitted under the current FAR (12.5 percent or approximately 125,000 square feet for the site, versus 233,000 square feet existing across two buildings). If the office buildings could not be reused, mixed-use development would require an increase in the permitted FAR and coverage requirements. Unlike the AT&T site, there are no major environmental constraints on this site. Current development precludes expansion options.

Scenario 1: Existing Zoning

- 88,621 sf office / lab
- Total parking area required: 94,529 sf
- Total parking spaces required: 295
- 44,310 sf building footprint
- Max impervious coverage: 35%
- Site FAR: 0.135

The 15-acre Advance site represents an opportunity for connective mixed-use development. This property has over 1,000 feet of frontage along U.S. Route 206. The Advance site lies in the OR-V Office Research-Village zone, where retail and residential are not permitted; rather, slightly smaller scale office and research development is permitted to provide a transition between the larger highway developments and the walkable Bedminster Village Center. The site is presently built out to its maximum under the current zoning.

Scenario 2

Lamington Road / Main Street Corridor

Redevelopment and improvements along Lamington Road would enhance the corridor to create an expanded and better integrated main street cross section. Land use options include conversion of single family homes into niche retail, local quality dining, and small professional office locations, supported with gateway entrances to calm traffic entering and passing through the Township.

The Main Street corridor would seek opportunities for shared parking and cross access easements to provide sufficient parking, especially for local (sit down) quality dining locations, and control or reduce the frequency of curb cuts and single-use parking areas that are often under-utilized outside of a building's core business hours.

Scenario 3

U.S. Route 206 Corridor Option A

U.S. Route 206 would be redesigned as a boulevard concept and supported with compatible land uses, including buildings sited along the street frontage with on-street, protected parking (i.e., "bulbed-in") along southbound U.S. Route 206 and gateways and enhanced pedestrian crossings. The design would present a more regional profile, with site infrastructure and amenities attractive to larger businesses and national chain dining and retail options. Land use options are focused on the Mallinckrodt and Advance sites on either side of U.S. Route 206.

Scenario 3: U.S. 206 Corridor Option A

- 106,774 sf residential
- 88,500 sf office
- 21,355 sf retail
- Total parking area required: 141,184 sf
- Total parking spaces required: 666
- 42,709 sf building footprint
- Impervious coverage: 38%
- Site FAR: 0.33

This site is being fully reoccupied by the Mallinckrodt pharmaceutical company. A mixed-use redevelopment proposal for the Advance site could support the office uses on the Mallinckrodt site, and provide for a greater diversity of building types and uses not feasible on the Mallinckrodt site. New development on the Advance site should be concentrated along U.S. Route 206 and the northern edge of the property. A mixed-use redevelopment could retain the three existing office structures (totaling 88,500 square feet) and add a limited amount of residential and retail uses to the west and north of those buildings, oriented towards Lamington Road. Approximately 80 residential units over 25,000 square feet of retail would diversify the uses on the site and provide an opportunity for a logical connection to the existing community facilities and businesses along Lamington Road. This expansion could be implemented through adoption of an overlay zone. The existing Hike and Bike Trail is also in close vicinity to this site and could be extended to serve both the residential and office uses.

Scenario 4

U.S. Route 206 Corridor Option B

Option B for the U.S. Route 206 Corridor would be similar, but provide flexibility among the mix of uses in addition to incentives for greater density on the Advance Realty site. Flexibility within the zoning overlay could allow for a mix that includes more retail and less residential, with related adjustments for parking requirements and site amenities. An enhanced retail component would serve employees on the Advance site and enhance the regional focus of an overall U.S. Route 206 corridor redevelopment plan and multimodal boulevard design.

Scenario 4: U.S. 206 Corridor Option B

- 87,040 sf residential
- 50,000 sf office
- 125,540 sf retail
- Total parking area required: 188,078 sf
- Total parking spaces required: 925
- 43,520 sf building footprint
- Impervious coverage: 35%
- Site FAR: 0.40

The overlay should incentivize opportunities for greater density through requirements for affordable and/or workforce housing and offsets for stormwater and related impacts using green infrastructure. Greater density and a more diverse mix of uses would require enhanced walkability and multimodal access both within the Advance site and for connections between Advance and Mallinckrodt, including an expanded internal network, sidewalks, crossings, and shared-use facilities, with connections to both existing and proposed Bedminster Hike and Bike Trails.

(from top left)

(1) Existing office buildings on the Mallinckrodt property; (2) Local businesses along the Lamington Road corridor in Bedminster Village Center; (3) Existing highway-oriented design of U.S. Route 206

Multimodal Transportation Improvements

The proposed redevelopment scenarios for the AT&T campus and nearby U.S. Route 202/ 206 frontage properties present the opportunity to create a walkable, more integrated village center with a character and mix unique to the area: large and small office, residential mix, Township schools and pre-K, local niche business, community assets such as library and post office, assorted restaurants, and many modern and upgraded buildings and infrastructure attractive to new and growing businesses.

Implementing a new vision for the Bedminster Village Center will require four main transportation improvements:

- Pedestrian-oriented redevelopment site plan strategies with internal circulation
- Enhanced regional active transportation connections
- Enhanced vehicular access to the PGIA in order to fully realize its mixed-use potential
- Enhanced U.S. Routes 202/206/Lamington Road arterial corridors to facilitate a cohesive, interconnected development pattern and a mix of land uses, and create gateways to Bedminster Village Center along primary north/south and east/west routes
  - » Reconfigure Route 206 to create a boulevard corridor and appropriate speed limits for a north/south regional boulevard
  - » Re-design Lamington Road using traffic calming, pedestrian crossings, and local parking strategies compatible with a local, east/west main street

Improvement strategies are outlined below and illustrated on the following map on the following page.

Site Plan Strategies

The proposed redevelopment scenarios seek to disassociate from the isolated single-use nature of the existing site and create a more walkable campus environment. Redevelopment should advance strategies compatible with the regional boulevard (U.S. 206) and main street (Lamington Rd) models, such as:

- Establish an internal street grid
- Provide a comprehensive sidewalk network, pedestrian-oriented streetscape, and convenient and direct pedestrian connections between buildings and land uses, and across main streets
- Minimize large surface parking lots using structured parking techniques
- Locate buildings close to the roadway frontage with parking in the rear. Prevent large parking lots from breaking up the site and discouraging walking
- Identify targeted opportunities for interconnected and shared parking, cross access easements, and protected on-street parking


AT&T Campus PGIA
Transportation Improvements
N
Old Dutch Rd E
Old Dutch Rd W
White Oak Ln
Hillside Ave
Riverwood Ave
Tuttle Ave
Sunny Branch Rd
Old Farm Rd
Fairview Dr
Willow Dr
Somerville Rd
Miller Ln
Library
Bedminster Schools
Clucas Brook Rd
Layton Rd
Belcher Rd
Douglas Rd
206
202
512
523
287
652
Install gateway treatments to slow traffic and support village-center development
Improve streetscape to calm traffic and support a cohesive village-center corridor
Enhance connectivity of the regional bicycle and pedestrian path network
Explore options to enhance PGIA access and network connectivity to the east
Investigate redesign as tree-lined boulevard to support a more multimodal friendly environment
Implement site design strategies to create an internal network and support a walkable, mixed-use campus
Investigate opportunities for wildlife and trail crossings to connect open space and preserved land
Potential Improvements
Road Connection
Path / Sidewalk Connection
Multi-use Path
Streetscape Improvements
Rt 206 Boulevard Concept
Improved Pedestrian Crossing
Gateway Treatment
Wildlife / Trail Crossing
Existing Facility
Path

- Traffic calmed/road diet design of main thoroughfares to create main street look and feel
- Enhanced pedestrian crossings and regional, off-street trail linkages

Regional Active Transportation Connections

The existing Bedminster Hike and Bike Trail and the region's open space is a significant amenity and supports north/south biking and walking options between residential areas of The Hills south of I-287 to Bedminster Village, including schools and the municipal complex. Planned improvements will soon extend it to Lamington Road. The goal is to use off-street (accessible if possible) facilities to link Bedminster with Far Hills and the NJ TRANSIT station. Scope of improvements might include:

- Enhance linkages between the trail and the AT&T Campus
- Extend trail north to U.S. Route 202
- Extend trail northeast to Far Hills and the intersection of U.S. 202 at Peapack Road via the Bedminster Parks Expansion parcel
- Investigate creation of a shared trail/wildlife crossing over/under U.S. Route 202/206
- Create trail connection between the AT&T Campus and Belcher Road, enabling direct bicycle access from residential areas to the east of the PGIA, including Far Hills NJ TRANSIT Station
- Identify critical trail crossings of North Branch Raritan River using pre-fab structures to minimize cost

Enhanced AT&T Site Access

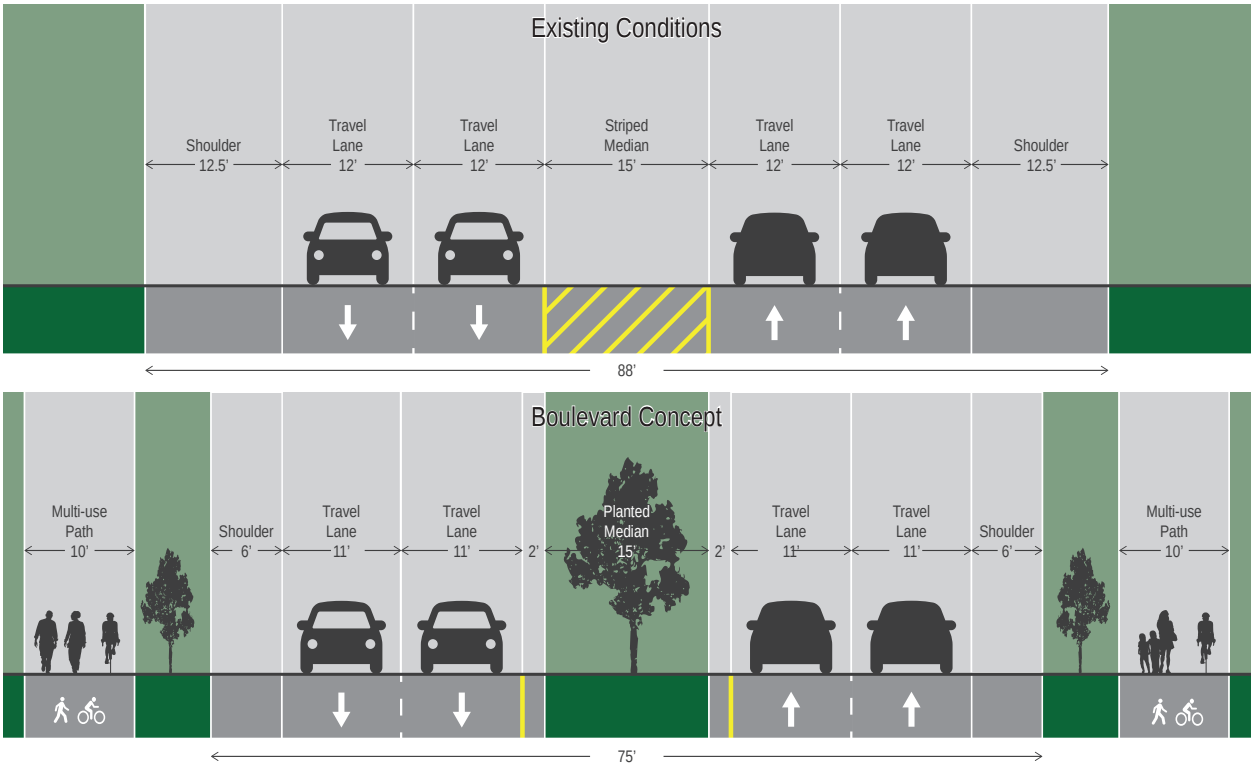
- Explore non-vehicular and vehicular options to provide vehicular access to the AT&T Campus from the east

Bedminster Township Hike and Bike Trail

Enhanced Arterial Roadway Corridors

The proposed mixed-use scenarios can be supported by reconfiguring the U.S. 202/206 and Lamington Road corridors and enhancing the streetscape to provide better multimodal access, improve connections, and create gateways to slow traffic as it transitions from highway environments to the desired Bedminster Village Center main street vision.

- Create a gateway design on Lamington Road 1 or 2 blocks west of U.S. 206 (near library building) and on U.S. 206 north of the Quick Chek, near the Hillside Avenue intersection
- Install multi-use side paths on both sides of U.S. 206 to accommodate both bicyclists and pedestrians. Due to the high traffic speeds on U.S. 206, a facility separated from motor vehicle traffic is necessary to support a facility that is comfortable for most cyclists
- Install connection from the Hike & Bike Trail to sidewalk network near the intersection of U.S. 202/206
- Provide Hike & Bike Trail connection and crossing of U.S. 202 between the school and Mallinckrodt site
- Provide pedestrian crossings (ped signal heads, crosswalks, curb ramps, sidewalk connections) at the signalized intersections of U.S. 206 at Mallinckrodt and Lamington Road
- Investigate feasibility of grade-separated pedestrian crossings at the intersections of U.S. 206 at Mallinckrodt and Lamington Road
- Blend corridor improvement along Lamington Road from Fairview Drive to the Far Hills Train Station, creating a consistent, traffic-calmed, rural downtown corridor



Existing (top) and conceptual (bottom) cross-sections for re-envisioning U.S. Route 206

Improvement	Order of Magnitude Cost (Est.)	Time Frame	Potential Partners
AT&T Campus PGIA			
Enhance linkages between Hike and Bike Trail and AT&T campus	Low	Med	Township / Developer
Extend Hike and Bike Trail north to U.S. Route 202	Med	Med	Township
Extend Hike and Bike Trail northeast to Far Hills and the intersection of U.S. 202 at Peapack Road via the Bedminster Parks Expansion parcel	Med	Med	Township
Create a gateways on Lamington Road near the library and on U.S. Route 206 north of the Quick Chek to clearly define entry to rural downtown transition from rural arterial function	Low	Med	Township / County / NJDOT
Install connection from the Hike and Bike Trail to sidewalk network near the intersection of U.S. Route 202/206	Low	Med	NJDOT / Township
Provide Hike and Bike Trail connection and crossing of U.S. 202 between the school and Mallinckrodt property	Low	Med	NJDOT / Developer / Township
Provide at-grade pedestrian crossings (pedestrian signal heads, crosswalks, curb ramps, sidewalk connections) at the signalized intersections of U.S. 206 at Mallinckrodt and Lamington Road	Low	Med	NJDOT / Township / County
Investigate feasibility of grade-separated pedestrian crossings at the intersections of U.S. 206 at Mallinckrodt and Lamington Road	Med	Long	NJDOT / Township / County
Investigate creation of a shared trail/ wildlife crossing over/under U.S. Route 202/206.	Med/High	Long	NJDOT
Identify critical crossings of North Branch Raritan River using pre-fab structures to minimize cost	Med	Long	NJDOT

Improvement	Order of Magnitude Cost (Est.)	Time Frame	Potential Partners
Install multi-use side paths on both sides of U.S. Route 206 to accommodate both bicyclists and pedestrians	Low	Long	NJDOT / Township / Developers
Explore non-vehicular and vehicular options to provide vehicular access to the AT&T Campus from the east	Low	Long	Township / County / Developer
Blend corridor improvement along Lamington Road from Fairview Drive to the Far Hills Train Station, creating a consistent, traffic-calmed, rural downtown corridor	Med	Long	Township / County / NJDOT
Integrate site design strategies that support walkability, including an internal grid, pedestrian oriented streetscape, rear parking, integrated parking strategies, enhanced pedestrian crossings, etc.	Med	Long	Township / Developer
Reconfigure U.S. Route 206 to create a regional boulevard corridor and appropriate speed limits	High	Long	NJDOT / County / Township / Developer
Enhance traffic calming, pedestrian crossings, and local parking strategies compatible with a local, east/west village main street along Lamington Rd	Low	Long	Township / County / NJDOT

NOTE:

Order of Magnitude Cost tiers:

- Low: <$5M
- Medium: $5M - $25M
- High: >$25M

Time Frame tiers:

- Short: <3 year
- Med: 3-8 years
- Long: >8 years

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FAR HILLS VILLAGE CENTER

Description

Location / Far Hills Borough, NJ

Principal Roadways / U.S. 202, CR-512, Demun Place, Dumont Road

Acreage / 66

Existing Uses / Residential, Commercial Center

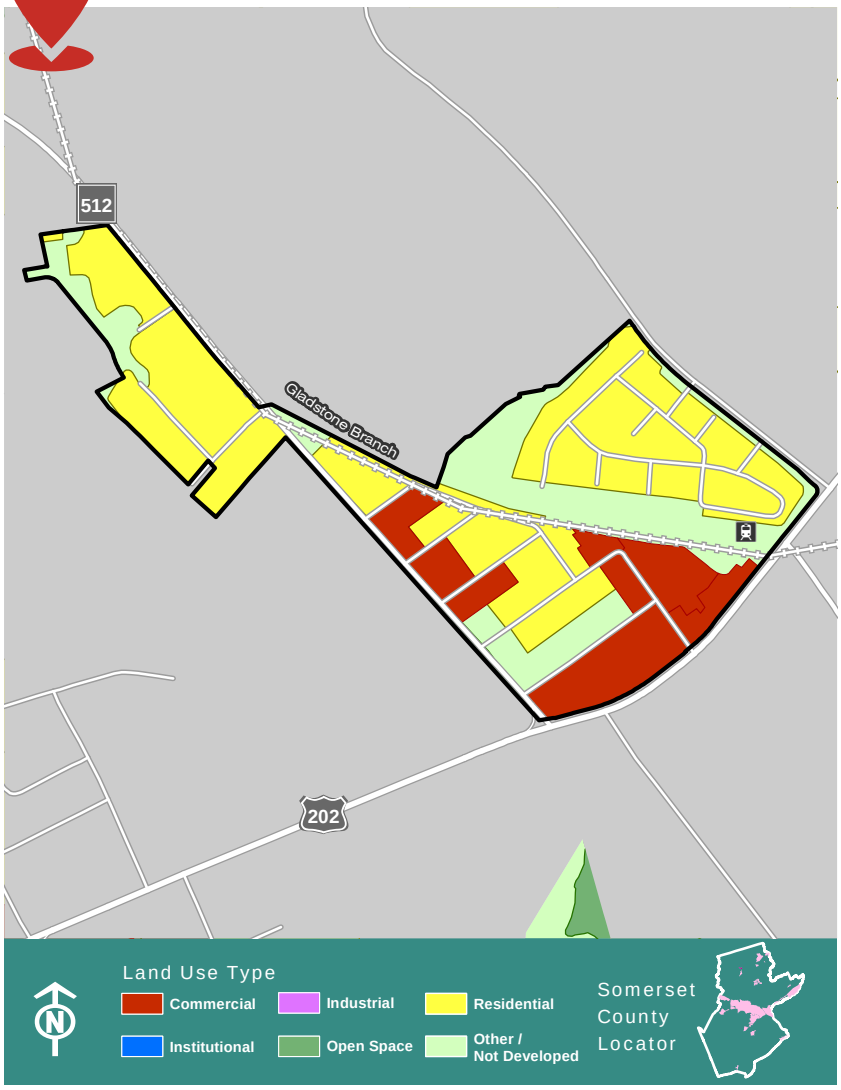
Current Zoning / Village Commercial (VC)

Complete Streets Policy / Yes

LPA Summary

The Village Center area is the focus of this LPA. It consists of a small commercial core with small-lot residential to the south and west, as well as the NJ TRANSIT railroad station. The Village Center represents an unusually dense area within the bucolic setting of Far Hills, and, as such, provides a unique opportunity to create a community-centered area for living and working. The recommendations set forth identify several zoning techniques and changes that could be used to incentivize appropriately-scaled development of key sites to create an identity for the Village Center as a unique, niche market for the surrounding area.

LPA Map



Multi-Modal Access Metrics

Transit Access

GOOD TRANSIT SERVICE

Network Walking Reach

SLIGHTLY WALKABLE

Access Summary

Multimodal access metrics indicate an autocentric environment within the overall LPA. There is no NJ TRANSIT bus service in the LPA. NJ TRANSIT's Far Hills Train station is in the LPA. The Village Center itself is a walkable node within the Borough, but the broader LPA is slightly walkable due to a low density of the roadway network, limited street connectivity, and the railroad, which divides the local roadway network. A detailed analysis of the transportation infrastructure can be found in the Existing Conditions Technical Memorandum.

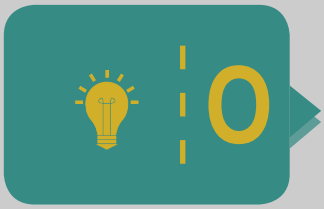
Investment Area Overview

Strengths

- Access to NJ TRANSIT Far Hills Train Station
- Historic character is a desirable amenity
- Walkable downtown
- Wide sidewalks
- Municipality has a Complete Streets policy

Weaknesses

- Gaps in the sidewalk network
- Conflicts between the pedestrians and driveways along U.S. Route 202
- Lack of wayfinding and gateway treatments
- State highway is also main street



Opportunities

- Wayfinding signage could help leverage cultural history of Far Hills
- Gateway treatments and traffic calming
- Large parking lot at train station partially owned by town
- Undeveloped/underutilized buildings

Constraints

- Lack of interconnection among disparate parking lots
- Existing structures limit options to create additional roadway or pedestrian connections

Land Use and Planning Scenarios

The recommendations identify two focus areas that could incentivize appropriately-scaled development at key sites to create and enhance an identity for the Village Center as a unique, niche market for the surrounding area. Zoning changes would be paired with multimodal, traffic calming, placemaking, and parking improvements to create a more integrated and walkable downtown village center.

Focus Area 1: Existing Zoning Analysis and Recommendations

Based on a preliminary analysis of the Village commercial properties, it appears that many – if not most – existing sites do not conform to existing standards. Further, while the core buildings retain an attractive appearance from U.S. 202, there is an overall scattered appearance from the Village's interior, including many curb cuts and varying building and architectural styles, as well as unscreened surface parking areas. The Borough has also stated that Village retail businesses have sometimes found it difficult to thrive. The following proposed zoning techniques would encourage cohesive development patterns and upper-floor residential uses throughout the Village Center by revising the FAR and impervious coverage requirements in the Village Commercial (VC) zone.

Scenario 1

Existing Zoning

The existing VC zoning is relatively permissive regarding uses, permitting a variety of retail, service, professional office, and restaurant uses, in addition to one- and two-family dwellings and mixed-use residential structures. The minimum lot size for non-residential uses is 7,500 square feet, with a maximum FAR of 0.20 and maximum impervious coverage of 50 percent. Under the current zoning, a total of 1,500 square feet of development would be permitted on a conforming 7,500 square foot lot. While this may be enough for a single small retail store, it would be virtually impossible to construct multifamily upper-floor residential in conjunction with retail development within these requirements.

Scenario 2A

Bonus Zoning for Larger Lots

Consolidating several lots would provide more building area, but would represent a decrease in density from the existing Village development pattern. To rectify this discrepancy, the VC bulk standards could be revised into two options based on lot size, where larger lots (e.g., 10,000 square feet or greater) are permitted an increased FAR up to 0.50. An additional bonus could be granted for upper-floor residential that includes workforce or affordable housing and if green building features are utilized. Development would still have a 35-foot height requirement.

Left: New automotive dealership in Far Hills designed to fit the local context and surrounding vernacular architectural style

Top-Right: Proposed rendering for infill development in Newtown Borough historic district, Newtown, PA

Scenario 2B

Sliding Scale Density Bonus Alternative

This alternative is an enhanced version of Scenario 2A that provides additional flexibility within the zoning ordinance to allow an increase in impervious coverage based on lot size in order to provide additional incentives for redevelopment and infill opportunities in constrained areas.

Scenario 3

Architectural Controls

Architectural controls could also be put in place for new commercial development, which may assure Borough residents of the commitment to enhancing, not changing, the Borough's character. All new commercial development should be cohesive with the Borough's existing vernacular architecture. The image above depicts a recently-renovated property in Far Hills that has been modernized but remains consistent with that village's colonial character. This example demonstrates that careful planning can ensure cohesive design between vernacular architectural style and new development in a manner consistent with local context and character.

Focus Area 2: Placemaking Strategies

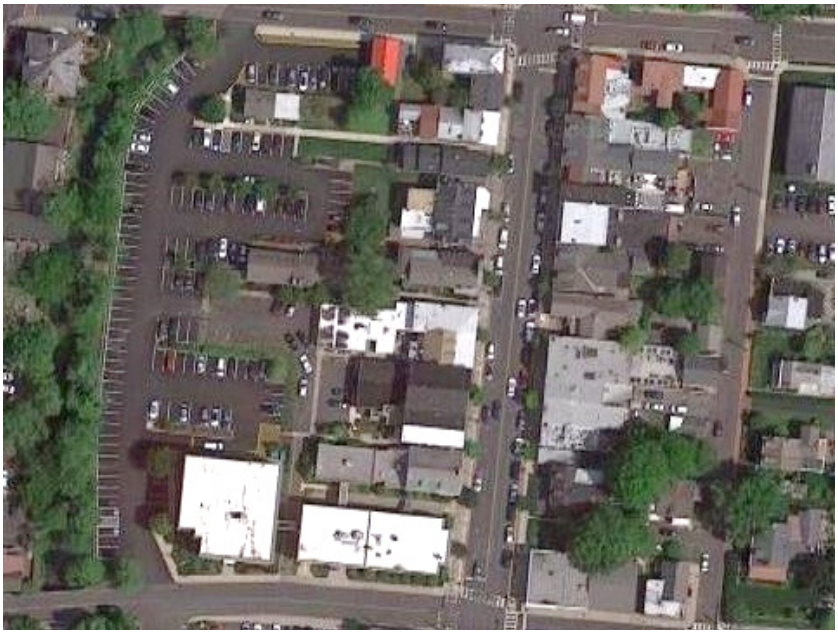
The Borough has a stated goal set forth in the 2009 Reexamination Report to maintain the existing status of businesses in the Village that provide "essential retail and personal services to the residents of the Borough and adjacent Bedminster," rather than offer chain or destination stores that may affect quality of life for village residences and create traffic or parking problems. To this effect, there are no major land use changes regarding scale or type of uses proposed with regards to the zoning revisions and standards. To complement this, several placemaking strategies are provided with the goal of establishing a variety of activities, neighborhood dining options, niche retail, and context-driven commercial uses to enhance the experience and the viability of the Village at its current scale.

Promote Connections and Walkability

The Village Center's location on and adjacent to U.S. Route 202 provides excellent access, but creates some challenges regarding the pedestrian orientation of the Village. While there is a walkable street grid leading from U.S. Route 202 to the north in the Village residential area, there are several dead ends and alleys between buildings that act as deterrents to walking between uses.

While the actual road layouts may not change, the Borough may consider policies that promote shared parking and concentrate off-street parking in one or more particular areas (such as near the train station, or in the vicinity of the offices along De Mun Place). Off-street parking would be well buffered but provide easy pedestrian connections between different properties, such as the example from Newtown, PA, shown below.

Shared parking and cross-access easements should be encouraged wherever possible to catalyze small-scale development, including analyzing whether there are underutilized parking areas at the train station or elsewhere in the Village.



Historic Downtown of Newtown, PA. Surface parking is centered to the rear of one block, which encourages walking between uses and utilizing street crossings.

Encourage Daytime and Weekend Uses

Though the Borough is a dry town, there may be the potential for bring-your-own-bottle (BYOB) restaurants depending on local interest and how the law is codified, with the rail station being the preferred location. BYOB restaurants are popular and often well-regarded throughout the State. The model can also encourage entrepreneurship due to the reduced start-up costs, since an expensive liquor license does not need to be procured. If the Borough cannot or prefers not to permit BYOB restaurants, a high-quality restaurant could be an option. Any restaurant use should be harmonious with the surrounding vernacular style. One incentive for restaurant uses may be the potential for shared parking using the rail station parking area which is available during evenings and weekend business hours.

Strengthen Community's Physical Character

Street furniture, corner features, and other placemarkers provide an opportunity for the Village to assert its character while creating a more comfortable and inviting shopping and visiting experience for locals. Such features do not necessarily need to be tall or large in scale to have an impact, but rather can serve as gathering places for visitors and focus on the pedestrian, rather than vehicular experience, to encourage walking. The fire house hose tower is an excellent example of the local vernacular stye. These types of features would allow the Borough to set forth an architectural character to be replicated in future development, enhancing the Far Hills Fairgrounds as a destination with crosswalks, walking paths, furniture, lighting, and landscaping would help to implement this concept. These features could be combined with green infrastructure to achieve multiple goals.

Top-Left: Outdoor interest: street furniture and inviting sidewalk displays in Bedford Hills, NY

Top-Right: Small plaza with clock, Spring Lake, NJ

Bottom-Right: Modified barn with clock tower feature, United Kingdom

Multimodal Transportation Scenarios

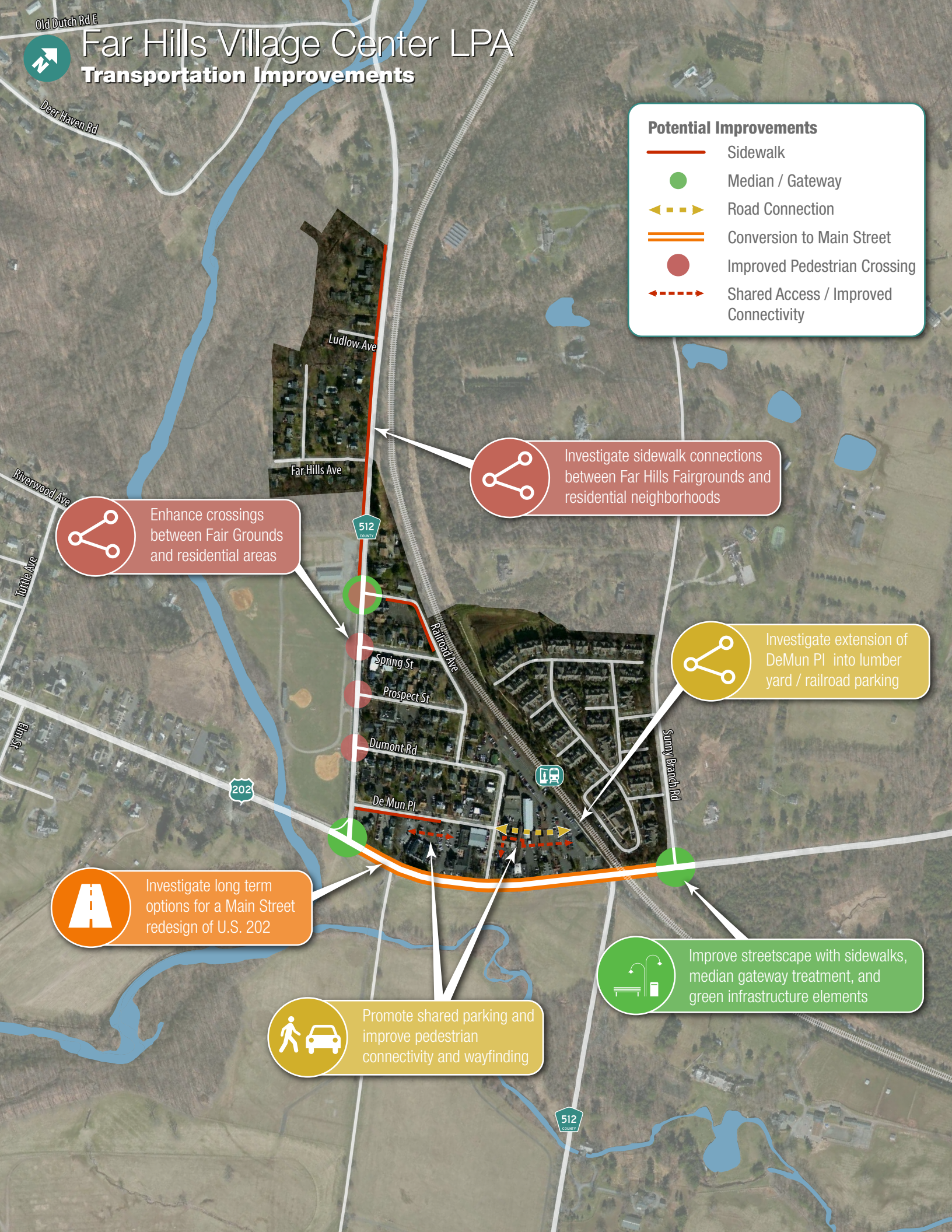
Far Hills is a small and compact village center with NJ TRANSIT rail service and a mix of homes and retail services, as well as destinations like the Far Hills Fairgrounds and the Far Hills Race Meeting. Far Hills adopted a Complete Streets policy in 2014, consistent with the Borough's objective of creating a street network that accommodates all modes and supports the local context and needs. The recommendations outlined below and illustrated on the map on the following page provide strategies to help implement this policy, facilitate the land use scenarios, and support a cohesive Village Center without increasing traffic through residential areas. A detailed traffic study of local village circulation is recommended.

Recommendations

- Investigate design options and feasibility to efficiently manage traffic and provide traffic calming and gateway features at the U.S. Route 202 and CR 512/Peapack Road entrances to the Borough, including context sensitive median islands consistent with the Borough's aesthetics and sense of place (e.g., landscaped island with plantings and/or signage, or mountable cobblestone island) to better define the Village and provide traffic calming benefits, and integrate crosswalks and "Welcome to Far Hills Borough" signage. Gateway and traffic calming elements also provide an opportunity to incorporate green infrastructure into design and landscaping features.
- Improve wayfinding, driveway and train station access, and Dumont Road to create a cohesive village atmosphere, giving passing traffic a reason to stop, visit, and engage local businesses and dining options.
- Enhance sidewalks and provide public benches, streetscaping, and lighting. Consolidate access to mitigate conflicts between pedestrians and turning vehicles; seek opportunities to integrate green infrastructure elements, such as bioswales, rain gardens, and street tree plantings.
- Improve connectivity and promote and implement cross access easements and shared parking in the Village Center and the train station parking area. Off-street parking would be well buffered, but provide enhanced pedestrian connections between neighboring properties.
- In addition to filling in gaps in the existing sidewalk network, investigate extending the sidewalk on the west side of CR 512, north of the Fairgrounds, would provide pedestrian connectivity for those who live within walking distance of Village services and transit.
- Investigate enhanced pedestrian crossings between the Village Center and the Fairgrounds, such as curb extensions and signage.

Far Hills Village Center LPA

Transportation Improvements



- Enhance Fairgrounds as a destination with crosswalks, walking paths, furniture, lighting, and landscaping.
- Install wayfinding signage that provides directional information for local businesses, attractions, and parking, and could also incorporate attractive local branding that reflects the cultural history of Far Hills.
- Formalize circulation around the old lumber yard buildings to improve safety via the addition of striping to reinforce the one-way pattern; warning signs to alert motorists about the presence of pedestrians; landscaping, planters or curbing to define the space and maintain slow traffic speeds; and consideration of naming this loop (providing a 'street' name). Investigation of a potential extension of De Mun Place directly into the lumber yard property would also enhance local street connectivity. Alternatively, in a scenario where this area is evaluated for redevelopment, circulation could be revisited in a more comprehensive manner that considers the needs of both motorists and pedestrians.
- Improve pedestrian connectivity through the Borough commercial area. Creating a formal pedestrian connection between the lumber yard area, the train station parking lot, and Dumont Road would allow for improved connectivity for those using transit (or transit parking in the evenings and on weekends) and the services offered by businesses located within the Ludlow Square complex and businesses south of Dumont Road.
- Undertake a village circulation study to evaluate local and regional strategies for vehicular traffic, parking, non-motorized mobility, and transit options.

Top: Village Center along U.S. Route 202

Right: Existing circulation around the businesses in the former lumber yard

Improvement	Order of Magnitude Cost (Est.)	Time Frame	Potential Partners
Far Hills Village Center LPA			
Investigate options for traffic calming and gateway features at the U.S. 202 southbound and CR 512/Peapack Road entrances to the Borough	Low	Med	Borough / County / NJDOT
Improve wayfinding and enhance access along U.S. 202 to the train station, driveways, and Dumont Road	Low	Med	Borough / NJDOT
Enhance sidewalks and provide public benches, streetscaping, and lighting. Consolidate access to mitigate conflicts between pedestrians and turning vehicles	Low	Med	Borough / NJDOT
Investigate extending sidewalk on the west side of CR 512, north of the Fairgrounds	Low	Med	Borough / County
Enhance pedestrian crossings between the Village Center and Fairgrounds	Low	Med	Borough / County
Install wayfinding signage that provides directional information for key businesses, attractions, and parking facilities	Low	Med	Borough
Reinvigorate and enhance the Fairgrounds as a destination with crosswalks, walking paths, furniture, lighting, and landscaping	Low	Med	Borough
Undertake a village circulation study to evaluate local and regional strategies for vehicular traffic, parking, non-motorized mobility, and transit options	Low	Med	Borough / County / NJ TRANSIT / NJDOT
Improve pedestrian connectivity through the Borough commercial area. Creating a formal pedestrian connection between the lumber yard area, the train station parking lot, and Dumont Road	Low	Med	Borough

Improvement	Order of Magnitude Cost (Est.)	Time Frame	Potential Partners
Improve connectivity and promote and implement cross access easements and shared parking in the Village Center and the train station parking area	Low	Long	Borough
Formalize circulation around the old lumber yard buildings. Investigation of a potential extension of De Mun Place directly into the lumber year property would also enhance street connectivity	Low	Long	Borough
Investigate redesign of U.S. Route 202 as a main street with integrated transit, pedestrian, and traffic calming features	Med	Long	Borough / NJDOT

NOTE:

Order of Magnitude Cost tiers:

- Low: <$5M
- Medium: $5M - $25M
- High: >$25M

Time Frame tiers:

- Short: <3 year
- Med: 3-8 years
- Long: >8 years

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BERNARDSVILLE TOWN CENTER

Description

Location / Bernardsville Borough , NJ

Principal Roadways / U.S. Route 202, CR-525, CR-613, Anderson Hill Rd, Old Army Rd

Acreage / 879

Existing Uses / Commercial Downtown District, Residential, Quarry

Current Zoning / Business District (B-1), Commercial (C-1), Highway Development (HD) District

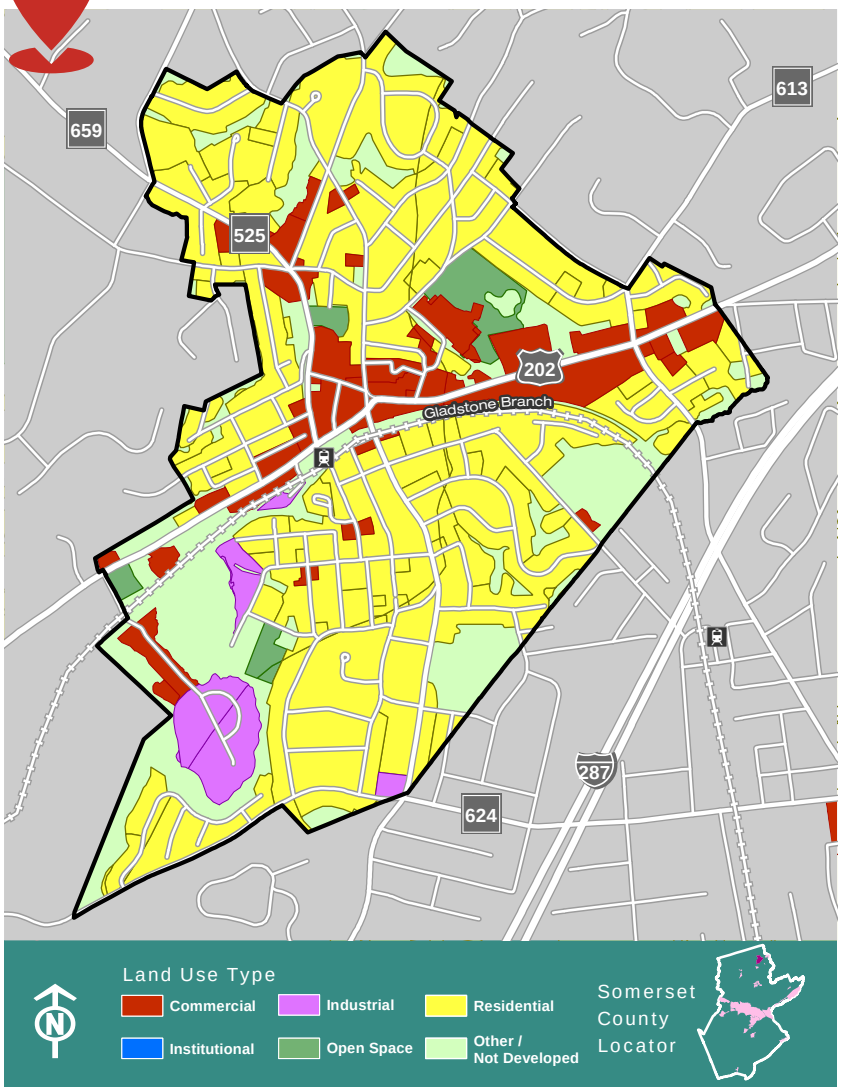
Complete Streets Policy / No

LPA Summary

Bernardsville's Town Center LPA consists of a mixed-use core near the train station, as well as a slightly larger-scale commercial strip to the north along Route 202. While there is some single-family residential development in the vicinity, most is located to the south of the railroad tracks.

The town center area features several important assets, including the NJ TRANSIT station, which provides some Midtown Direct Service during peak hours, and a walkable, traditional downtown and amenities. There are some challenges, including limited downtown residential population and a lack of cohesive street and urban design elements to promote walkability.

LPA Map



Multi-Modal Access Metrics

Transit Access

GOOD TRANSIT SERVICE

Network Walking Reach

SLIGHTLY WALKABLE

Access Summary

Multimodal access metrics indicate a variety of transportation choices. While there is no existing NJ TRANSIT bus service in the LPA, NJ TRANSIT's Bernardsville Train station is located in the town center. The downtown area is a walkable node within the LPA; however, the broader LPA is only slightly walkable due to topographic constraints and the railroad tracks, which limit street network and connectivity. A detailed analysis of the transportation infrastructure can be found in the Existing Conditions Technical Memorandum.

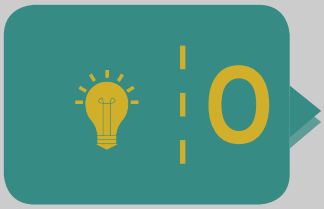
Investment Area Overview

Strengths

- Accessible from a network of state and county roadways, including U.S. Route 202, and County Routes 525, 613, 659, and 624
- Compact, walkable town center environment
- Desirable mix of accessible entertainment, civic amenities, and dining options
- Easy access to NJ TRANSIT's Bernardsville Train Station

Weaknesses

- Lack of pedestrian crossings proximate to the pocket park / 'town green' at the Route 202/Anderson Hill Road intersection
- Lack of wayfinding signage and streetscape amenities
- Large concentrations of crashes in the downtown
- Shallow lots along the transitional corridor incompatible with current zoning discourages redevelopment and reuse
- Bernardsville Borough lacks a Complete Streets policy



Opportunities

- Underutilized private and/or transit parking resources could be made available after hours and on weekends.
- Expand and interconnect off-street multi-use trail linkages
- Encourage redevelopment and mixed use alternatives through zoning incentives
- Provide density and mixed use incentive to encourage housing diversity and green design elements

Constraints

- Lack of daytime customers for morning and mid-day shopping
- No cohesive design to promote the streetscape or encourage walkability
- Many auto-oriented uses disrupt sidewalks and potential for pedestrian connections

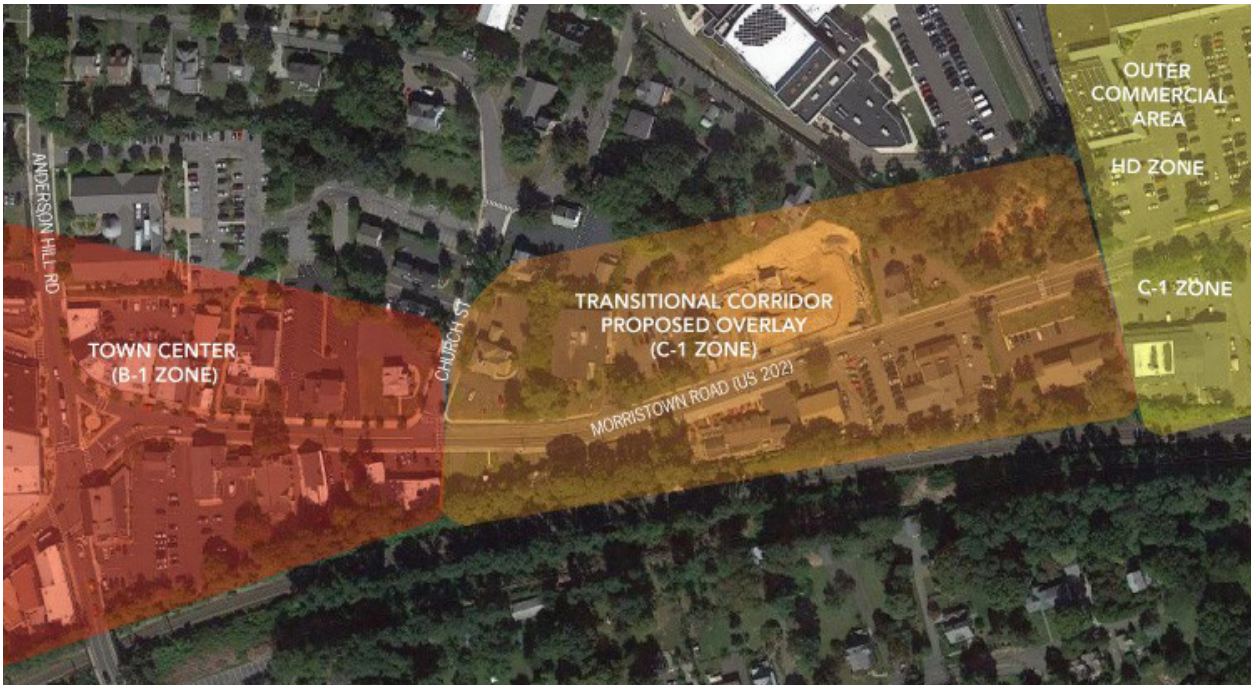
Land Use and Planning Scenarios

The focus of the Bernardsville Town Center LPA centers around the U.S. Route 202 commercial corridor. While the existing character of the corridor varies from compact, mixed-use typical of a town center to larger lots and highway-oriented development, there are opportunities to encourage a more cohesive community form along the corridor and enhance the Borough's historic, walkable center.

For the purposes of this analysis, the portion of the Borough's commercial corridor along Morristown Road between the train station in the west and Finley Avenue to the east has been divided into three sub-areas:

- Town Center between the train station and Church Street
- Transitional Commercial area between Church Street and the HD Zone
- Outer Commercial area extending eastward from the HD Zone on the north and ShopRite on the south sides

The following sections summarize the existing context and recommendations for each sub-area. The recommendations are intended to be used either individually or in whole areas to meet the Borough's goals and objectives.



Study Area Subdivisions

Focus Area 1: Town Center Sub-Area

The entirety of the Town Center sub-area is located within the B-1 Business district, which permits a variety of street-level neighborhood retail, service, and office uses with upper-floor residential. In keeping with the traditional downtown setting, there are minimal setback requirements. The district has a maximum building height of 2 stories/30 feet for commercial buildings and three stories/35 feet for mixed-use commercial/residential buildings. Studio and one-bedroom residential dwellings are permitted on upper floors.

Scenario 1

Incentivize Upper-Floor Residential

Though up to two stories for commercial buildings and three stories for mixed-use buildings are permitted in the B-1 district, a large portion of the buildings in the Town Center are a single story, particularly within attached commercial strips. The Borough could consider a zoning amendment to incentivize residential development, though major increases in height or density may not be appropriate for the Town Center. Since many modern retail uses require higher ceiling heights, the maximum height for mixed-use buildings could be amended to permit 40 feet/three stories for two stories of residential over retail space. Residential development could further be incentivized by reducing the parking requirement if the developer provides a shared parking plan utilizing existing private or municipal lots. There is also an opportunity for the Borough to provide workforce and/or affordable housing units in the Town Center by eliminating the provision that only studio and one-bedroom units may be constructed.

Scenario 2

Encourage Upper-Floor Office Uses

The ordinance may also be amended to allow upper-floor office space in addition to residential uses, encouraging second-floor construction while the residential market is still developing. An increase in office uses would also create additional opportunities for day/night shared parking as more residential units come onto the market.

Focus Area 2: Transitional Corridor Sub-Area

Located within the C-1 Commercial District, the same retail and residential uses as the B-1 Business District are permitted, with the addition of new auto sales. The increased setback requirements in the C-1 district versus the B-1 district are generally consistent with the reduced density of this corridor compared to the Town Center. However, the required front yard setback of 42 feet presents a hardship for properties located on the south side of the corridor between Morristown Road and the railroad tracks. Due to their narrow shape, most of these properties do not (and/or cannot) meet this standard. Uses include a freestanding ATM, animal hospital, garden center, auto body shop, and most notably, the vacant former Audi dealership. This area has a different character than the larger shopping centers farther east or the larger parcels on the north side of the corridor (including the office building and newly constructed Chase Bank).

Scenario 1

Overlay for Undersized Properties

An overlay zone that accommodates reduced setbacks for non-auto oriented uses would address the challenging lot sizes along this corridor, particularly on the south side of Morristown Road. To better represent the existing setbacks and provide a transition between the Town Center and Outer Commercial Areas, setbacks would be reduced to those of the B-1 zone for properties under 40,000 square feet. Most notably, the front yard setback would be reduced from 42 feet (which few properties comply with) to 10 feet.

The overlay would retain the permitted uses in the C-1 zone with the exception of prohibiting auto-oriented uses, such as auto sales and drive-throughs, which disrupt and detract from pedestrian space along this portion of the corridor. This area is within a 10 minute walk of the train station and there is a continuous sidewalk apart from large curb cuts in the vicinity of the auto body and car dealership. Design standards related to the overlay should focus on providing a cohesive pedestrian experience, including continuous sidewalks, safe crossings, and street-facing entrances.

Scenario 2

Targeted Commercial Redevelopment

The site of the former Audi Dealership (Block 125, Lot 13) presents a highly visible development opportunity in this corridor. The site appears to be nonconforming to current C-1 bulk standards (front and rear setbacks, impervious coverage). The size and narrowness of the property preclude it from conforming commercial development if the existing building were to be razed. However, the existing building could potentially be re-used as a restaurant or retail use, with approximately 6,000 square feet on the first floor. There are approximately 50 parking spaces on the site, which is more than would be necessary for a retail use. Removal of excess pavement would enhance the site in terms of both aesthetic and environmental concerns.

Scenario 3

Small-Scale Multi-Family Residential

Another option would be to group this site and the surrounding similarly narrow properties for a new low-rise, multi-family residential project, such as stacked flats. Such a development on the Audi site and the adjacent auto body property to the west could consist of approximately 20 one- and two-bedroom stacked flats, with parking split between first floor rear garages and well-screened surface parking. The building would be two to three floors, within the existing 35-foot height restriction. The site is located near grocery stores and convenience retail, is within a 10 minute walk of the train station, and would provide an enhanced pedestrian environment as compared to the existing auto-oriented uses.

Transitional Corridor Sub-Area: Small-Scale Multi-Family Residential

- 23,625 sf residential
- 20 residential units
- 12,618 sf building footprint
- Total parking area required (with garage): 13,040 sf
- Total parking spaces required: 36
- Maximum impervious coverage: 85%, Site FAR: 0.80

Focus Area 3: Outer Commercial Sub-Area

For the purposes of this examination, the Outer Commercial Sub-Area is defined as the lots and overall development with frontage along Morristown Road that are located between the eastern edge of the Transitional Corridor and Finley Avenue, beginning with Kings Shopping Center (Block 64, Lot 23) on the north side of the corridor and the small strip center (Block 125, Lot 15) on the south side of the corridor. The properties on the north side of Morristown Road within this Sub-Area are located in the Highway Development (HD) District, which permits retail sales and services, offices, restaurants, and similar uses that are envisioned on larger-scale properties with a front yard setback of at least 175 feet. Properties on the southern side of the corridor are located in the C-1 district.

The lots in the C-1 district are generally larger in size and in scale of development than those located in the Transitional Corridor. Its larger lot sizes, distance from the Town Center core, and auto-oriented nature distinguish much of this area from the Town Center and Transitional Corridors. As a result, no specific recommendations are proposed at this time.

Overall LPA Recommendations

In addition to the targeted recommendations for each sub-area, several strategies can be applied to the entire corridor to support an active, pedestrian-friendly, and vibrant town center commercial area.

Enhanced Urban Design & Streetscape: The Borough's most recent Master Plan Reexamination (2006) addressed the goal of "physical enhancement" in the downtown area, stating that this "may include new store facades, new canopies, street furniture, landscaping, pattern sidewalks, and period street lamps" and may be paid for by private investment or public/private partnerships. As the Borough seeks to prepare a new Master Plan, this goal could be advanced as part of an overall public art initiative, presenting the Town Center as the epicenter of an arts district.

The public art initiative could be accompanied by green design elements. This could include presenting specific examples and introducing design controls for downtown businesses as part of an ordinance update, in cooperation with the Borough's Chamber of Commerce. Smartly designed bike racks could be required for commercial businesses based on number of employers or square footage. New green public spaces, such as pocket parks or landscaped plazas, can provide community spaces and public seating, while also providing an aesthetic example for surrounding businesses.

Shared Parking: The Borough has taken advantage of some opportunities for shared parking. The Borough ordinance has a provision that permits shared parking between mixed uses at the discretion of the Planning Board. This could be taken a step further by codifying a shared parking provision specific to the Town Center area in order to promote off-site shared parking arrangements between property owners, which may include restricted hours or reserved spaces for each use.

The Borough may also consider reducing the parking requirement for residential units, which is currently higher than that set forth in the RSIS to further encourage development of upper floor units.

Vacant Storefront Management: The Borough or Chamber of Commerce may consider encouraging landlords in the Town Center to maintain vacant storefronts with a specific appearance that screens the interior and could provide a spotlight for community events, student artwork, or a similar Borough interest. This would also provide strong visibility for branding or display for the arts initiative.

Top-Left: Vacant space with local-identified wrapping

Bottom-Left: Traditional "for lease" signage

Bottom-Right: Clocktower plaza in downtown Madison, NJ, an example of enhanced urban design and streetscape strategy

Multimodal Transportation Improvements

Bernardsville Town Center has a mix of local niche businesses that draw both local residents and visitors, including a movie theater, restaurants, yoga studio, and retail stores. To support and enhance this vibrant Town Center, mobility improvements seek to better link the central core to the transitional and outer commercial areas; promote an attractive, pedestrian-oriented streetscape; and enhance multimodal access, mobility, and safety. The improvement strategies are outlined below and illustrated on the map on the following page.

Streetscape and Roadway Improvements

- Integrate new development into the streetscape and orient it towards the street frontage, consistent with a walkable town center. Reduce building setbacks, provide parking behind the building, and ensure the primary building entrance faces the street and sidewalk network
- Extend streetscape elements from the downtown northward, including pedestrian-scaled lighting to better illuminate the sidewalk realm along U.S. Route 202
- Install wayfinding signage that clearly and attractively identifies major destinations, key businesses, community facilities and parking, and creates a unifying branding image or "look" for the downtown
- Further integrate curb extensions into the streetscape to encourage slower vehicle speeds and expand the pedestrian realm, creating more opportunities for wider sidewalks, street furniture and amenities, public space, and green stormwater management. The section of U.S. Route 202 between Mt Airy Road and the train station has on-street parking, making it particularly well-suited for more expanded use of curb extensions
- Investigate reducing the speed limit from 30 mph to 25 mph between Woodland Road and Finney Avenue, consistent with a dense, walkable village center. In conjunction, investigate implementing a gateway treatment along the approaches to the downtown to alert motorists and reinforce the transition to 25 mph

Wide crossing of U.S. Route 202 presents an opportunity for curb extensions and gateway treatment entering the Town Center from the south.


Bernardsville Town Center LPA
Transportation Improvements
N
Investigate reducing speed limit from 30mph to 25mph in the village center
Improve streetscape and add wayfinding to create a unifying branding image for the downtown
Evaluate opportunities to consolidate access, create shared parking, and improve wayfinding to parking
Investigate opportunities for a bike depot at the train station
Enhance bicycle and pedestrian connectivity between residential areas and the village center
Potential Improvements
Streetscape Improvements
Speed Limit Reduction
Shared Lane Markings
Path / Sidewalk Connection
Improved Pedestrian Crossing
Olcott Ln
Seney Dr
Old Army Rd
Highview Ave
Mullens Ln
Olcott Ave
Anderson Hill Rd
Wesley Ave
Mill St
Somerset Ave
Quimby Ln
Woodland Rd
Chilton St
Boylan Ter
Prospect St
West St
Washington Ave
Mine Ave
Bernards Ave
Maple St
Hill St
Orchard St
Conkling Ave
Conkling St
Old Quarry Rd
Sunset Dr
Liberty Rd
Ann St
Courter St
Oakley St
William St
Pill Hill Rd
659
525
202
613
287
624

Parking and Access Improvements

- Integrate future enhancements with planned repaving and upgrades to the train station parking lot, sidewalks, and retaining walls
- Evaluate opportunities to consolidate and/or share parking areas through easements or other means so that parking resources can be better utilized, better managed, and lots can be connected, where feasible, to mitigate traffic circulating through the downtown seeking parking
- Convert existing head-in angle parking adjacent to the train station to head-out angle parking
- Consolidate access along U.S. Route 202, particularly along the northbound side between Mt. Airy Road and the Shop Rite plaza. Minimizing the number and length of curb cuts will improve the quality of the sidewalk network

Bicycle and Pedestrian Access

- Install safe, secure, and attractive bicycle parking and additional pedestrian amenities (e.g., seating) in the downtown and along U.S. Route 202 north of the downtown
- Investigate opportunities to implement a bike depot at the train station to enhance and encourage bicycle connections with transit. Collaborate with the New Jersey Bike and Walk Coalition, whose Bike Depot Program assists communities in installing and operating depots, and explore grant funding options such as Sustainable Jersey and the Partners for Health Foundation. Ridewise TMA also provides assistance with bicycle initiatives and programs
- Install a crosswalk (raised, if necessary to address grade differentials) from Mill Street across Anderson Hill Road/Olcott Square
- Install shared-lane markings through the village center (between Woodland Road and Finney Avenue). The U.S. Route 202 corridor itself is too narrow and constrained to accommodate dedicated bicycle lanes. While shared-lane markings alone do not create a more comfortable bicycling environment, the markings help increase motorist awareness and assert the legitimacy of bicyclists on the roadway, help bicyclists properly position themselves in the lane, and provide directional and wayfinding guidance. This would also signal the transition to a multimodal corridor, albeit on a limited basis, with limited connectivity as the surrounding area lacks any significant network of bicycle accommodations
- Investigate opportunities to improve bicycle and pedestrian access between the Town Center and residential neighborhoods south of the rail line. Access is currently only available via Mt. Airy Road. Potential opportunities include a pedestrian bridge over the rail line from Boylan Terrace to the train station, or from Mine Avenue to Lindabury Park
- Install sidewalk connection between the north end of the Lindabury Park trail and the sidewalk along U.S. Route 202
- Investigate opportunities to extend the Lindabury Park trail farther north behind the fire department station

Improvement	Order of Magnitude Cost (Est.)	Time Frame	Potential Partners
Bernardsville Town Center LPA			
Streetscape and Roadway Improvements			
Adopt Complete Streets policy	Low	Short	Borough
Investigate speed limit reduction from 30 mph to 25 mph along U.S. Route 202 between Woodland Rd and Finney Ave	Low	Short	Borough / NJDOT
Extend streetscape elements from the downtown northward, particularly pedestrian-scaled lighting	Med	Med	Borough / NJDOT
Install wayfinding signage to improve navigation and create a unifying branding image for the downtown	Low	Med	Borough
Integrate curb extensions into the streetscape along U.S. Route 202 between Mt Airy Road and train station	Low	Med	Borough / NJDOT
Investigate implementing a gateway treatment along the approaches to the downtown to alert motorists and reinforce the transition to 25 mph	Low	Med	Borough / NJDOT
Parking and Access Improvements			
Integrate future enhancements with planned repaving and upgrades to train station parking lot, sidewalks, and retaining walls	Low	Short	Borough / NJ TRANSIT
Convert existing head-in angle parking adjacent to the train station to head-out angle parking	Low	Short	Borough / NJDOT
Evaluate opportunities to consolidate and/or share parking areas throughout the town center	Low	Med	Borough / Developers
Consolidate access along U.S. Route 202, particularly along the northbound side between Mt Airy Road and the Shop Rite plaza	Low	Long	Borough / NJDOT / Developer

Improvement	Order of Magnitude Cost (Est.)	Time Frame	Potential Partners
Bicycle and Pedestrian Access			
Install a crosswalk from Mill Street across Anderson Hill Road/Olcott Square	Low	Short	Borough / County
Install shared-lane markings through the Town Center (U.S. Route 202 between Woodland Road and Finney Avenue)	Low	Short	Borough / NJDOT
Install bicycle parking and additional pedestrian amenities in the downtown and along U.S. Route 202	Low	Med	Borough / NJDOT
Investigate opportunities to implement a bike depot at the train station	Low	Med	Borough / NJ TRANSIT / NJ Bike and Walk Coalition / Ridewise TMA
Install sidewalk connection between the north end of the Lindabury Park trail and the sidewalk along U.S. Route 202	Low	Med	Borough
Investigate opportunities to extend the Lindabury Park trail farther north behind the fire department station	Low	Long	Borough
Investigate feasibility of pedestrian bridge over the rail line from Boylan Terrace to the train station, or from Mine Avenue to Lindabury Park	Med	Long	Borough / NJ TRANSIT

NOTE:

Order of Magnitude Cost tiers:
- Low: <$5M
- Medium: $5M - $25M
- High: >$25M

Time Frame tiers:
- Short: <3 year
- Med: 3-8 years
- Long: >8 years

I-78 EXIT 33 EAST SIDE

Description

Location / Warren Township, NJ

Principal Roadways / Interstate 78, CR-525, Mountainview Rd, Independence Blvd, Colonial Crossing

Acreage / 280

Existing Uses / Corporate Offices, Light Residential

Current Zoning / Office/Research (OR), Office/ Research/Hotel (ORH), Cluster Residential (CR-130/65)

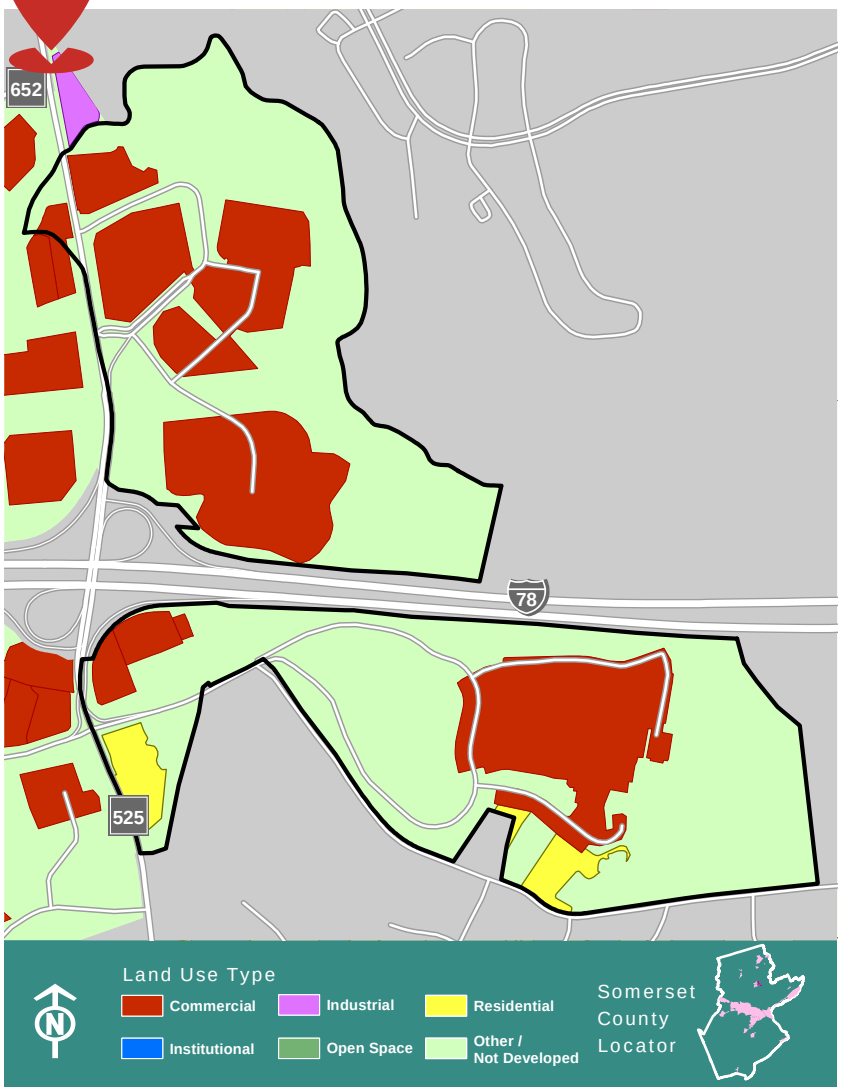
Complete Streets Policy / No

PGIA Summary

This area has long been developed with office and related uses including the nearby Somerset Hills Hotel. The Chubb site on the south side of Route 78 is the main area of focus. The existing building has limited appeal to today's office rental market and will be vacated by 2019.

The existing zoning does not allow for additional development beyond what exists and is already approved. Given the uncertainty of reuse for the existing building, the land use and planning scenarios explore options for modifying current zoning and development regulations to provide greater flexibility and options for expansion and/or reuse.

PGIA Map



Multi-Modal Access Metrics

Transit Access

0.00

NO TRANSIT SERVICE

Network Walking Reach

0.28

SLIGHTLY WALKABLE

Access Summary

Multi-modal access metrics indicate an autocentric environment. The PGIA is not served by public transportation. The PGIA is slightly walkable due to a low density of the roadway network. The limited roadway connectivity discourages walking and biking. A detailed analysis of the transportation infrastructure can be found in the Existing Conditions Technical Memorandum.

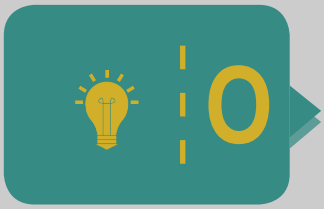
Investment Area Overview

Strengths

- Access to I-78 and county roadways
- Desirable and marketable community, residential options, and quality of life
- Accessible and desirable mix of dining, lodging, retail, and township park options
- Warren Township is developing a Complete Streets policy

Weaknesses

- There is no NJ TRANSIT bus service or Somerset County shuttle services within or near the PGIA
- Wide, unprotected crossing of Martinsville Road (CR 525) at Mountainview Boulevard
- No local street connections
- PGIA is not walkable due to lack of street network
- Existing building set far back from adjacent county roadway



Opportunities

- Reuse of existing office building and / or expansion through rezoning
- Constrained lands expand buildable area while being preserved from development
- Structured parking does not count against FAR calculations, providing flexibility for build options

Constraints

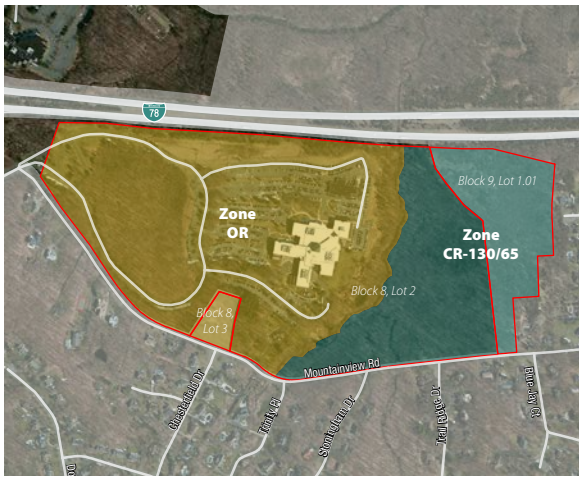
- County Road 525 serves as the primary connection between the two sections and with I-78.
- Existing zoning restricts new development
- The eastern portion of the property is environmentally constrained by the stream corridor and wetlands
- Existing building difficult to reconfigure for multiple tenants

Land Use and Planning Scenarios

This area has long been developed with office uses. Notably, an older office building (Center 78) has been successfully upgraded through a complete rehabilitation/renovation of the building and improvements to the site. There are other office buildings as well as the Somerset Hills Hotel in the vicinity. On the south side of Route 78, the main area of focus is the Chubb site. The existing building is obsolete and will be vacated by 2019. Three redevelopment scenarios for the Chubb site are outlined below. During the course of the study, the Township advanced several recommendations for the study area, which are reflected in zoning changes adopted in December 2016.

Site Details and Concepts

The Chubb property (Block 8, Lot 2) is approximately 116 acres. The property is split-zoned between the Office-Research (OR) and Cluster Residential (CR-130/65) districts. The existing development is entirely concentrated within the 80 acres on the western portion of the site that are within the OR district. The CR-130/65 district comprises the eastern 37 acres of the property. The zoning line is demarcated by a stream that serves as a tributary of the Dead River. The eastern portion of the property is environmentally constrained by the stream corridor and wetlands. Chubb also owns two adjacent properties to the south and east (Block 8, Lot 3 and Block 9, Lot 1.01, measuring 2.25 acres and 17 acres, respectively). Both are located in the CR-130/65 district and are considered environmentally sensitive.



Focus area (Chubbs property) existing zoning and parcel lines

Given the uncertainty of reuse prospects for the existing building, examining options to modify the development regulations for the site and some adjoining parcels may be warranted. Each concept envisions retaining the non-residential nature of the site and surrounding area, while exploring ways to enhance site amenities in ways that appeal to modern office users. These concepts also focus development to the areas near the interchange and preserve the environmentally sensitive areas and wetlands to the rear of the PGIA. Each scenario offers opportunities for enhanced open space and green infrastructure improvements that would allow for redevelopment of the site at equal or greater density than what currently exists, while avoiding development in the stream corridor and enhancing the protection of wetlands.

Scenario 1

Existing Zoning

The portion of the Chubb site that is located in the OR Zone comprises 80 acres. A full buildout in accordance with this zoning would allow approximately 515,000 square feet of office and research/lab space. The existing zoning does not allow for additional development beyond what exists and is already approved.

Scenario 1: Existing Zoning

- 387,140 sf research/lab
- 129,047 sf office
- Total parking area required: 468,718 sf
- Total parking spaces required: 2,065
- 430,155 sf building footprint
- Impervious coverage: 27.5%, Site FAR: 0.15

Scenario 2

Rezoning of Chubb Site and Adjacent Properties from CR-130/65 to OR for Office Use

The second scenario would expand the existing OR zoning to include the eastern side of the Chubb property as well as the two adjacent parcels. Adding to the area of this property and its zoning would enable additional floor area while concentrating development within the western portion of the site. In this scenario, the overall yield would increase to over 850,000 square feet of research, lab, and office space, without any changes to the OR zoning standards or creating a new zone for the property. The scenario assumes several parking structures would be built to accommodate the new employees, which would allow for approximately 20 percent overall impervious coverage on the full 135-acre site. The overall FAR for the site would remain at 0.15, the existing standard for the OR Zone.

Scenario 2: Rezoning of Chubb Site and Adjacent Properties from CR-130/65 to OR for Office Use

- 662,254 sf research
- 220,751 sf office
- Total parking area required: 618,246 sf
- Total parking spaces required: 3,532
- 441,502 sf building footprint
- Impervious coverage: 20.2%, Site FAR: 0.15

Scenario 3

Rezoning for Office/Hotel/Non-Residential Mixed Use

The third scenario would require amending the OR Zone to add a mixed-use option or developing a new zone to encompass the full 135 acres in order to consider allowing a mix of land uses (i.e., office and retail/service/hotel, but not residential). The new option could be applied only to properties greater than 100 acres in size, and also include requirements for green infrastructure and expansive open space as part of the proposed density increases.

In addition to office and research uses comprising approximately 850,000 square feet, the site would be supplemented with retail and hotel uses to diversify the type of development on the property and provide additional services for workers, nearby residents, and others. The total FAR of the site would rise to 0.20. The diversity of uses would also attract weekend visitors. There would also be environmental benefits from the lot consolidation, in that it will preserve the environmentally sensitive rear lands while concentrating development near the interchange. To accommodate the increased intensity of development, substantial buffers would be required between the development and environmentally sensitive areas and surrounding low-density residential neighborhoods.

This scenario would also be consistent with a trend in retrofitting older, single-user office buildings into multi-tenant, mixed-use complexes. The intention would be to promote a campus-like setting, as has been created at other retrofitted and redeveloped office developments in suburban areas. Adding complementary services on the site could help reduce traffic impacts due to the varied peak times of different uses and the ability for office workers to dine or shop on site, instead of driving off-site. Larger-scale examples, which could be emulated in part, include the former Exxon Research site in Florham Park, the Honeywell International headquarters in Morris Township, and the Bell Labs building in Holmdel. All three of these are former single-tenant complexes (or a massive single building, in Bell Labs' case) that have been or are being retrofitted for multiple tenants and uses. There would also be environmental benefits from the lot consolidation, in that it will preserve the environmentally sensitive rear lands while concentrating development near the interchange.

Scenario 3: Rezoning for Office/Hotel/Non-Residential Mixed Use

- 883,005 sf office/research
- 294,335 sf retail and 390,000 sf hotel
- Total parking area required: 883,616 sf
- Total parking spaces required: 3,961
- 568,436 sf building footprint
- Impervious coverage: 32.1%, Site FAR: 0.20 (excl. hotel)

Multimodal Transportation Improvements

The proposed redevelopment scenarios for the I-78 Exit 33 (East Side) PGIA focus on retrofitting or expanding the existing Chubb property to accommodate multiple tenants. The transportation improvements focus on supporting an office campus environment with improved internal circulation and interaction among a diversity of tenants and complimentary land uses.

Environmental constraints, surrounding residential development, and the I-78 corridor restrict opportunities for improved roadway connectivity. A pedestrian-oriented, mixed-use campus can help mitigate traffic issues by staggering peak hour demand among the different uses and keep a percentage of trips internal to the development. Improvement strategies are outlined below and illustrated on the map on the following page.

Recommendations

- Adopt a Warren Township Complete Streets Policy to support and prioritize the development of a multimodal street network over time
- Establish an internal street grid network
- Provide a sidewalk network, pedestrian-oriented streetscape, and convenient and direct pedestrian connections between buildings and land uses
- Minimize large surface parking lots
- Locate large parking areas towards the perimeter of the campus
- Install a shared-use path connecting the PGIA to the intersection of CR 525 and Mountainview Boulevard
- Install ADA-compliant curb ramps and shared-use path connections at the intersection of CR 525 and Mountainview Boulevard, providing access to the existing crosswalks and pedestrian signals
- Convert the existing striped median to a raised crossing island on the northbound approach of the CR 525 and Mountainview Boulevard intersection, encouraging slower vehicle speeds and creating a more comfortable pedestrian crossing
- Stripe shoulders along Mountainview Boulevard, limiting the travel lanes to 11 feet
- Provide an access point from the southeast side of the PGIA for non-motorized traffic. Conduct a multimodal connections assessment for the surrounding area to identify potential circulation improvements for non-motorized traffic and better linkages between the PGIA and other sites
- Explore opportunities for a park and ride location and regional transit service. Encourage transit friendly design and development patterns in and around the PGIA


I-78 Exit 33 (East Side) PGIA
Transportation Improvements
N
Spring Valley Blvd
Allen Rd
Independence Blvd
Colonial Crossing
Explore opportunities for park & ride location and services
Implement site design strategies to create an internal network and support a walkable, mixed-use campus
78
Mountainview Blvd
525
Westgate Dr
Mountainview Rd
Investigate restriping with shoulders to narrow travel lane and improve conditions for bicyclists
Provide access and explore bike/ped connections to the surrounding area
Chesterfield Dr
Trinity Pl
Stoningham Dr
Trail Ridge Dr
Blue Jay Ct
Downingtown Ct
Chubbs Property
Potential Improvements
Path / Sidewalk Connection
Multi-use Path
Shoulder Improvements
Improved Pedestrian Crossing

Improvement	Order of Magnitude Cost (Est.)	Time Frame	Potential Partners
I -78 Exit 33 (East Side) PGIA			
Adopt Complete Streets policy	Low	Short	Township
Install a non-vehicular, shared-use path connecting the PGIA to the intersection of CR 525 and Mountainview Boulevard	Low	Short	Township / County
Stripe shoulders along Mountainview Boulevard, reduce travel lanes to 11'	Low	Short	Township
Install ADA-compliant curb ramps and shared-use path connections at the intersection of CR 525 and Mountainview Boulevard	Low	Med	County / Township / Developer
Convert the existing striped median to a raised crossing island (with pedestrian refuge) on the northbound approach of the CR 525 and Mountainview Boulevard intersection	Low	Med	County / Township
Provide an access point from the southeast side of the PGIA for non-motorized traffic	Low	Med	Township / Developer
Provide a sidewalk network within the office area	Low	Med	Developer / Township
Investigate opportunities for a park and ride location and regional transit service	Low	Med	Developer / Township
Establish an internal street grid network within the office area	Med	Long	Developer / Township
Conduct a multimodal connections assessment for the surrounding area to identify potential circulation improvements for non-motorized traffic and better linkages between the PGIA and other sites	Low	Long	Township

NOTE:

Order of Magnitude Cost tiers:
- Low: <$5M
- Medium: $5M - $25M
- High: >$25M

Time Frame tiers:
- Short: <3 year
- Med: 3-8 years
- Long: >8 years

WATCHUNG VILLAGE CENTER

Description

Location / Watchung Borough, NJ

Principal Roadways / CR 527, CR 531, CR-653, Brookdale Road

Acreage / 93

Existing Uses / Residential, Small Commercial District, Open Space

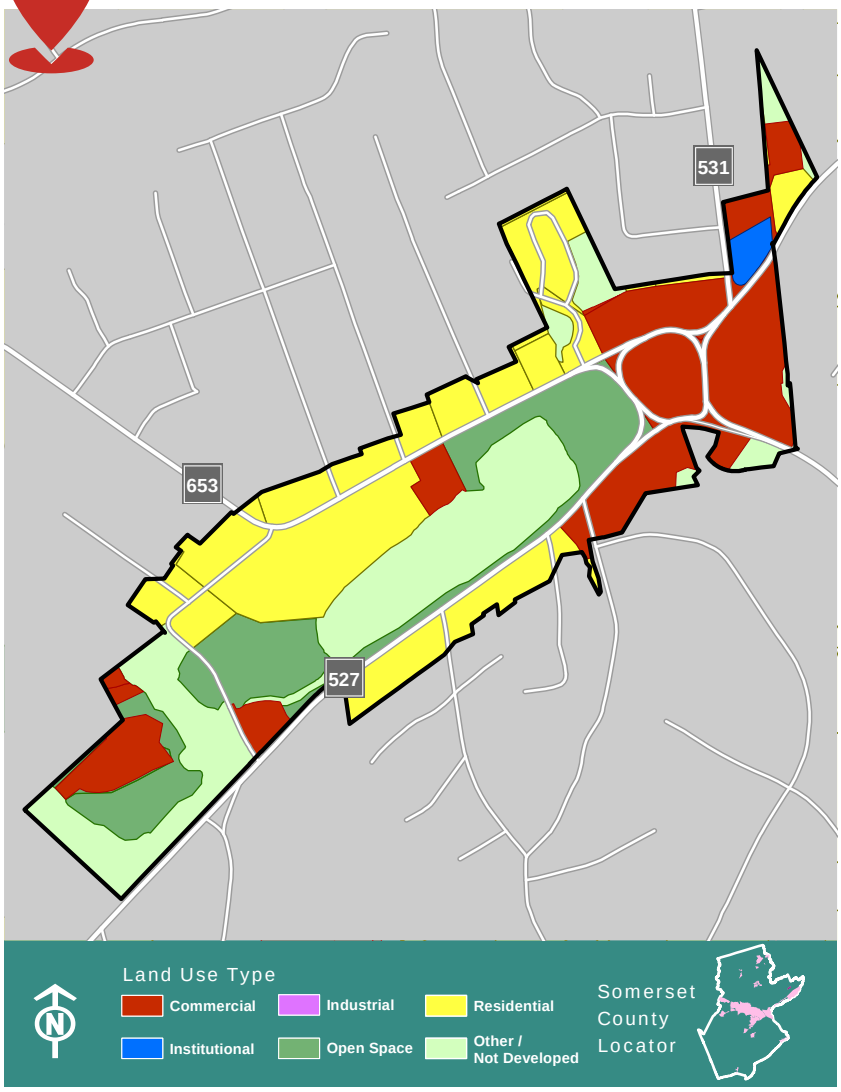
Current Zoning / Professional Office (B-B)

Complete Streets Policy / No

LPA Summary

The Watchung Village Center LPA is located at the confluence of a number of major roads centering on the traffic circle of Mountain Boulevard, Stirling Road, and Valley Road. The area is characterized by the presence of civic buildings, parks, and waterbodies, with commercial uses along the major roadways and residential development slightly further out from the circle. Commercial uses in the vicinity are generally neighborhood-scale services, including fuel, banks, and medical and professional offices. The mixture of uses around the circle has led to a land use pattern and character that is more aligned with a civic center than a true mixed-use village center.

LPA Map



Multi-Modal Access Metrics

Transit Access

0.00

NO TRANSIT SERVICE

Network Walking Reach

0.36

SLIGHTLY WALKABLE

Access Summary

Multi-modal access metrics indicate an autocentric environment across the LPA. There is no NJ TRANSIT bus or train service in the LPA. The LPA is slightly walkable due to a low density of roadway network and limited street connectivity. A detailed analysis of the transportation infrastructure can be found in the Existing Conditions Technical Memorandum.

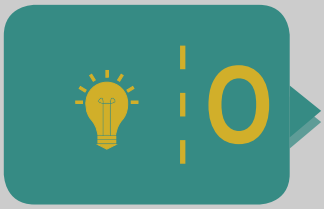
Investment Area Overview

Strengths

- LPA and surrounding area is host to a diverse mix of uses and a hub of Watchung civic and public facilities
- Access to Watchung and Best lakes, multiuse trails, and borough parks
- Access to nearby arterial and interstate highways
- Local dining and commercial options

Weaknesses

- High crash rates along CR 527
- Lack of public transit facilities
- No on-road bicycle facilities
- High-stress cycling environment
- Chronic traffic backups at circle during peak hours
- Watchung Borough lacks a Complete Streets policy



Opportunities

- Improve interconnections between public lands and facilities
- Improve pedestrian access and safety at crossings and connectivity to local destinations
- Consolidate and/or reduce the length of driveways and conflicts
- Recommend adopting a Complete Streets policy

Constraints

- Limited street network connectivity constrains both local and regional mobility
- Nearly half of the LPA area is within the 1 percent flood risk zone

Land Use and Planning Scenarios

Land use scenarios for the LPA focus on the Watchung traffic circle and Village Center. The overall concept for the area centers on enhancing the public and civic uses as a destination, complemented by limited commercial and residential development. The proposed scenarios are guided by the recommendations set forth in the Borough's Master Plan, specifically promoting civic and green spaces, enhancing pedestrian access and circulation, and fostering a more robust mixed-use environment, while remaining conscious of potential traffic impacts and the scarcity of large tracts of developable land.

Existing Issues and Concept

The area surrounding the Watchung traffic circle has recurring traffic congestion, limited vehicle access, and minimal connectivity between land uses. There are two successful commercial sites on the northern side of the circle, including a small multi-tenant shopping center and a professional/medical office building. Given surrounding conditions and the wealth of retail centers nearby on U.S. Route 22, larger scale retail development is neither appropriate nor desirable for the area.

While the Master Plan notes that various roadway, safety, and pedestrian improvements have been made in this area, there are outstanding recommendations for the enactment of design standards and zoning controls for the Village Center that address "architectural themes which reflect the scale, details, ornamentation and overall appearance of traditional American villages and which are compatible with the existing architecturally significant buildings in this portion of the Borough." The Master Plan recommendations also promote "a mixed-use village environment which includes municipal government offices, retail shops and services, professional offices and residences and which emphasizes pedestrian circulation, attractive civic spaces, environmental preserves, greens and parks."

The following scenarios are guided by the recommendations set forth in the Borough's Master Plan. Overall goals for the area will be addressed via a series of recommendations for programming, streetscaping, and connectivity between town center-area properties. While there is limited available land around the Watchung traffic circle for new development, two focus sites have been identified and scenarios are presented below for each. The existing office building on the northern side of the circle (40 Stirling Road) is currently occupied, but in the event that it may be vacated in the future, it may represent a viable site for mixed-use development, including residential and retail, or retail and office. Across the circle, the former Valley Furniture site is constrained by a stream crossing but is large enough to allow for development of a restaurant or small retail space.

LPA-Wide Recommendations

As the civic center of Watchung, the LPA is centrally located and offers potential for walkability between sites that is not plausible elsewhere in the area. The Borough has taken advantage of the area's natural features by preserving green space and creating civic landmarks in the vicinity of Borough Hall. In order to enhance the retail environment, the Borough may consider promoting off-peak activities that span the area, which is already somewhat in place with the Farmer's Market and Texier House Museum. Weekend and evening activities could be served by government or office parking areas, which are not utilized during these hours. While this would require cooperation between the Borough and business owners, the partnership could prove beneficial for both parties, particularly if there was an incentive to reduce parking requirements for individual uses as part of a broad plan for the Village Center. However, any shared parking or area-wide use would require substantive connectivity, signaling, and striping improvements for pedestrians.

Focus Area 1: 40 Stirling Road

The property located at 40 Stirling Road measures 2.5 acres in area and is located in the Borough's B-B Professional and Office Zone. The property has frontage on Stirling Road along the traffic circle, and Valley and Hillcrest Roads to the east and northeast of the circle. Vehicular access is provided via Stirling Road, with an additional exit-only driveway to Hillcrest Road (right-turn only). The site is adjacent to residential uses to the north, which are located uphill from the site and are separated by a mature tree buffer.

Scenario 1

Existing Conditions / Existing Zoning

Per promotional leasing material, the existing building on the site measures approximately 31,500 square feet and includes 100 parking spaces. Tenants are primarily medical and small professional offices. Under the current zoning, which permits 30 percent building coverage and has a maximum height limit of 35 feet, an office building measuring approximately 62,726 square feet could be constructed. However, there would be no way to meet the parking requirements (1 space per 250 square feet for professional office, 1 space per 166 square feet for medical office) on the site for a building this size. While the existing building is under-parked by ordinance standards, the size and scale of the building are similar to what would be the realistic maximum under the current zoning.

Scenario 1: Existing Conditions - General Office

- Total square footage: 62,726 sf
- Total parking area required: 80,290 sf
- Total parking spaces required: 251
- 31,363 sf building footprint
- Maximum impervious coverage: 70%
- Site FAR: 0.60

Scenario 1: Existing Conditions - Medical Office

- Total square footage: 31,363 sf
- Total parking area required: 60,217 sf
- Total parking spaces required: 188
- 31,363 sf building footprint
- Maximum impervious coverage: 70%
- Site FAR: 0.30

Scenario 2

Mixed-Use Residential / Retail

A second scenario beyond the B-B zoning could include a mixed-use residential/retail building. The building could have a smaller footprint than the existing building but remain oriented towards the circle, with parking in the rear. Such a project could include approximately 30 to 40 residential units with 10,000 square feet of retail space. The higher amount of residential could be contingent on provision of affordable or workforce housing, with the highest permissible density associated with a fully inclusionary project that would help address the Borough's affordable housing obligation.

While the square footage would be significantly smaller than the maximum buildout under current zoning, the reduced parking requirements for retail and residential (100 spaces vs 250 spaces for equivalent office area) would enable a more efficient use of the site and potentially allow for more open space and green infrastructure improvements. There is also the opportunity to improve walkability between the site and the small adjacent plaza, which includes some convenience retail. Residential and retail use would likely have a more staggered traffic pattern than the existing professional offices. The site's multiple frontages may mitigate the impact on the surrounding residential area, particularly if green infrastructure and/or building design techniques are utilized.

Scenario 2: Mixed Use - Residential / Retail

- 33,106 sf residential, 39 residential units
- 10,000 sf retail
- Total parking area required: 33,142 sf
- Total parking spaces required: 104
- 26,553 sf building footprint
- Maximum impervious coverage: 80%, Site FAR: 0.41

Scenario 3

Mixed-Use Retail / Office

The final scenario for this site would encompass ground-floor retail with upper floor office uses. As parking requirements would limit the scale of such a mixed-use development, the additional space on the site would provide an opportunity for buffering and enhanced pedestrian improvements, with specific priority placed on green infrastructure design. A combination of 10,000 square feet of retail and 25,000 square feet of office would require approximately 130 parking spaces along with a two-story building with a smaller footprint. The lower impervious coverage would allow for additional open space.

Scenario 3: Mixed Use - Retail / Office

- 25,000 sf office
- 10,000 sf retail
- Total parking area required: 41,600 sf
- Total parking spaces required: 130
- 17,500 sf building footprint
- Maximum impervious coverage: 70%, Site FAR: 0.33

Focus Area 2: Valley Furniture Site / 20 Stirling Road

The vacant Valley Furniture site is one of the larger properties in the vicinity (1.5 acres), but is constrained by a stream that runs parallel to Valley Road. To allow for use of the site and mitigate stream impacts, redevelopment as a smaller scale retail or restaurant use would bring off-hours activity to the area while maintaining the scale of surrounding properties.

Scenario 1

Existing Conditions / Existing Zoning

The site is currently comprised of two standalone two-story buildings, measuring 9,000 and 6,000 square feet, respectively. The property was re-zoned from B-A Neighborhood Business to B-B Professional and Office in 2009, with the goal of reducing traffic and impacts on the surrounding historic center. The existing furniture store use is nonconforming under this zoning, which permits medical and professional offices, photography studios, and funeral parlors. The reuse of these buildings as professional office space would require 60 parking spaces, which may be challenging given the environmental constraints. Additionally, this type of office use may increase rush-hour traffic in the area.

Scenario 1: Existing Zoning

- Total parking area required: 19,200 sf
- Total parking spaces required: 60
- 7,500 sf building footprint
- Maximum impervious coverage: 70%,
- Site FAR: 0.23

Scenario 2

Retail Use

To minimize impact and protect the constrained areas of the site, a low-impact retail use could be sited on the property, either utilizing an existing building or by redevelopment of the site. A retail space measuring approximately 6,000 square feet would require 20 to 25 parking spaces, which could also potentially be shared with neighboring office uses. While retail uses are not permitted in the B-B zone, they were permitted in the former B-A zoning district.

Scenario 2: Retail Use

- Total parking area required: 7,680 sf
- Total parking spaces required: 24
- 6,000 sf building footprint
- Maximum impervious coverage: 70%
- Site FAR: 0.09

Scenario 3

Restaurant Use

The success of nearby restaurants has shown that such a use may be desirable in this area, particularly one that may serve as a complement to existing office uses during the day and residential uses at night. A restaurant would have a smaller footprint due to the more intense parking needs; the site could accommodate a 120-seat restaurant with a 4,000 square foot footprint and 40 parking spaces. The restaurant could alternatively be sited in one of the existing buildings with office or catering space upstairs, which would reinforce the scale and historic nature of the site and the Village Center.

Scenario 3: Restaurant Use

- Total parking area required: 12,800 sf
- Total parking spaces required: 40
- 4,000 sf building footprint
- Maximum impervious coverage: 70%
- Site FAR: 0.06

Multimodal Transportation Improvements

The proposed multimodal improvement scenarios for the Watchung Village Center focus on promoting green spaces, enhancing pedestrian access and circulation, and fostering mixed-use development around the Watchung traffic circle. The scenarios seek to improve walkability between sites around the traffic circle, promoting off-peak activities in the area that would have minimal impact on existing traffic patterns. Improvement strategies are outlined below and illustrated on the map on the following page.

Existing Issues

Traffic backups are a major issue in the LPA and are primarily concentrated during peak hours. A significant amount of regional traffic passes through the LPA as limited network connectivity and topographic constraints tend to funnel trips through the traffic circle. It is also the junction of three county roads (CR 527, 531, and 653), which provide connections to I-78 interchange 40, the U.S. Route 22 corridor, and other regional destinations. Traffic is also impacted due to minimal street connectivity between the uses in the local area, where there are few mixed-use buildings. There are many curb cuts and the sidewalk network is inconsistent between uses.

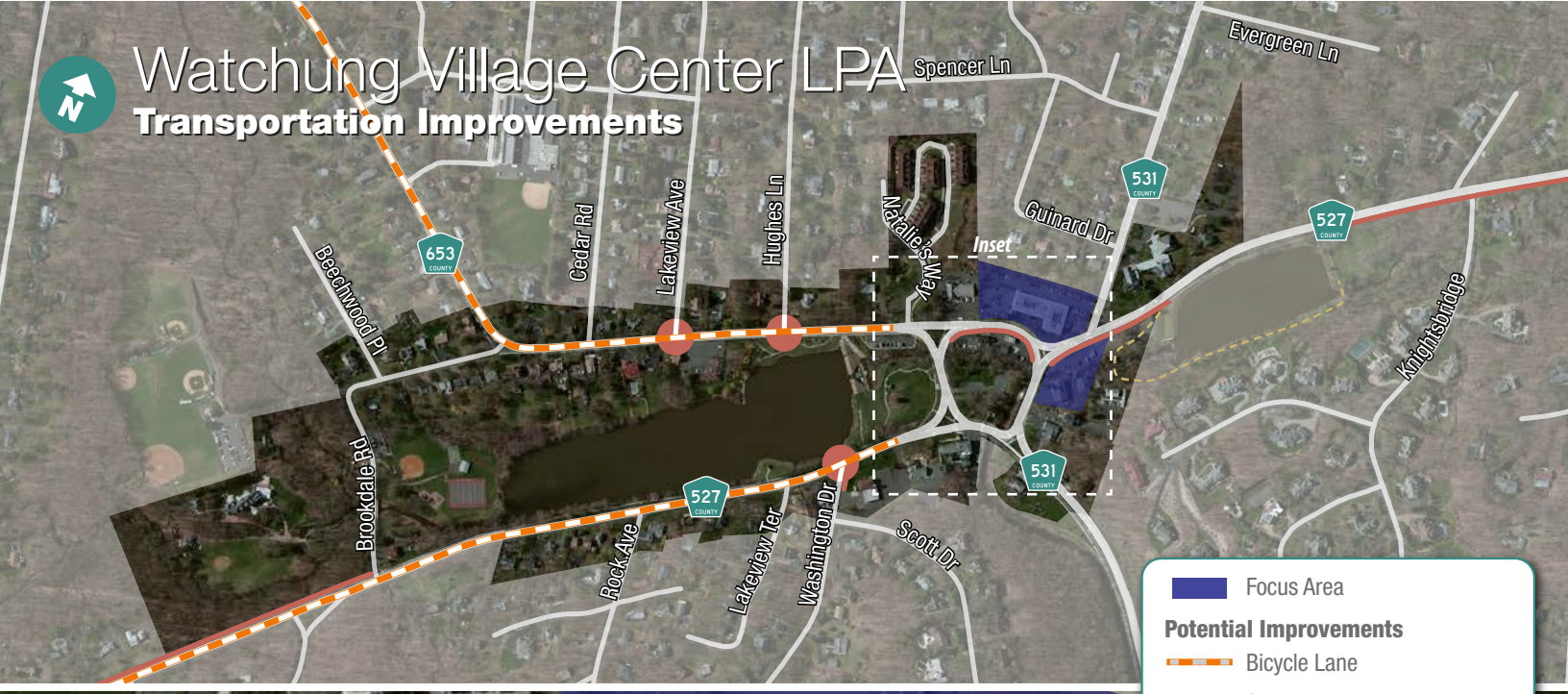
Recommendations

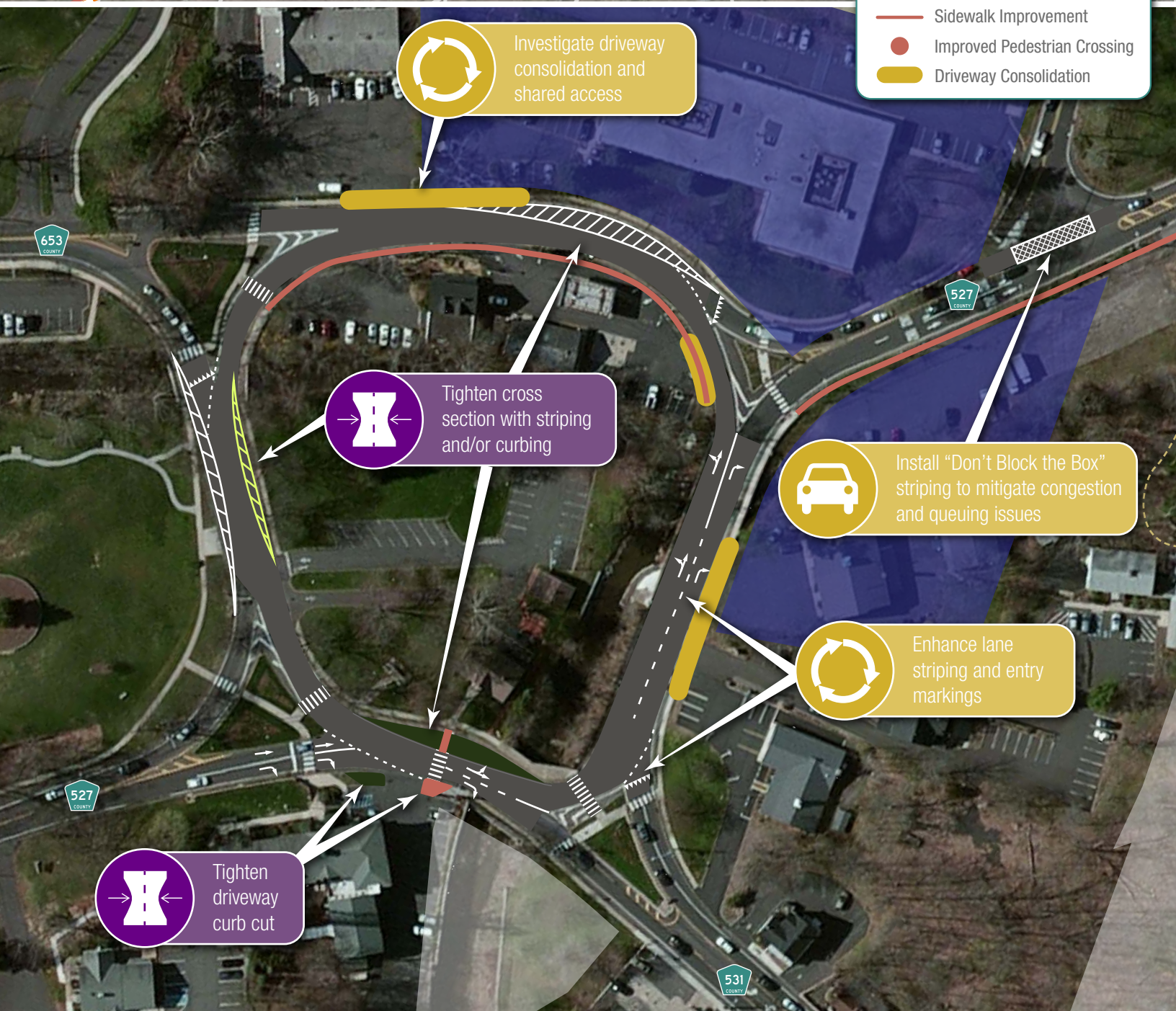
The following strategies seek to enhance multimodal access, safety, and mobility; support the land use scenarios; and reinforce recommendations of the Borough's Master Plan.

- Adopt a municipal Complete Streets policy
- Complete sidewalk network around the traffic circle to improve walkability
- Improve pedestrian access and safety at crossings and connectivity to the park, museum, memorial, and the library. Install pedestrian crossing signs and ADA-compliant curb ramps at all four entry/exit locations of the traffic circle and midblock crossing to the museum
- Encourage shared parking in the town center with improved pedestrian connectivity and wayfinding between land uses and destinations.
- Improve pedestrian facilities along portions of CR 527 (Valley Road and Mountain Boulevard), consistent with the Borough's recent Transportation Alternatives Program (TAP) grant application:
  - » Replace existing asphalt sidewalk between Best Lake and Bayberry Lane, including ADA-compliant curb ramps and crosswalks along the south side of Valley Road
  - » Install sidewalk between Washington Rock Road (at entrance to Ness Property) and Brookdale Road, preferably on the north side to better connect with the existing sidewalk network

- Improve pedestrian access to Watchung Lake Park by providing and/or enhancing connections to the surrounding residential neighborhoods. The existing sidewalk network is on the lake-side of Mountain Boulevard and Stirling Road, so marked crossings are needed to improve access, including:
  - » Mountain Boulevard at Washington Drive: relocate crosswalk to north side of the intersection, which would better align with the existing sidewalk on Washington Drive. Fill short gap in the Washington Drive sidewalk network and install ADA-compliant curb ramp
  - » Stirling Road at Lakeview Terrace and Hughes Lane: Install crosswalk and ADA-compliant curb ramps
- Investigate opportunities to convert shoulders on Mountain Boulevard (typical cartway width approximately 34 feet; consistent with the Borough's recent TAP grant application) and Stirling Road (typical cartway width approximately 32 feet) to standard bike lanes
- Investigate driveway consolidation and/or reduce the length of open driveways along the circle, reducing the number of conflict points and improving safety for all users. Potential opportunities for driveway consolidation and shared access include:
  - » Eastern segment of the circle, including the library, rescue squad, and furniture store
  - » Northern segment of the circle: In lieu of driveway consolidation, investigate narrowing the eastern driveway at the shopping center at the northwest corner and converting it to enter-only, thereby eliminating vehicle movements that exit from this driveway and cut across traffic in the circle
- Install yield bar pavement markings at yield-controlled entry points to the traffic circle (i.e., Stirling Road, Valley Road, and Somerset Street) to reinforce right-of-way rules and driver behavior
- Enhance striping within the circle to more clearly define the circle and traffic movements, inducing:
  - » Dashed edge striping at entry points
  - » Wide shoulders on the western and norther segments to clearly convey sections that are intended to be a single lane facility and discourage vehicle weaving movements
  - » Turn lanes on the southern and eastern segments to clearly define space for separate traffic movements
  - » Extend curbing in front of the museum on the southern segment to tighten the traffic circle's cross section
- Investigate tightening the curb radii and realigning the entry points to slow vehicular traffic and improve driver sight distance
- Install striping and signage at the intersection of CR 527 at CR 531 advising motorists not to block the crossing. The treatment would help mitigate congestion issues that often cause queues for left-turning traffic to extend into the traffic circle

Watchung Village Center LPA
Transportation Improvements





Improvement	Order of Magnitude Cost (Est.)	Time Frame	Potential Partners
Watchung Village Center LPA			
Adopt a Complete Streets policy	Low	Short	Borough
Install yield bar pavement markings at yield-controlled entry points to the traffic circle	Low	Short	Borough / County
Install “Don’t Block the Box” striping and signage at the intersection of CR 527 at CR 531	Low	Short	Borough / County
Install sidewalk between Best Lake and Bayberry Lane, including ADA-compliant curb ramps and crosswalks along the south side of Valley Road	Low	Med	Borough / County
Install sidewalk between Washington Rock Road (at entrance to Ness Property) and Brookdale Road	Low	Med	Borough
Mountain Boulevard at Washington Drive: relocate crosswalk to north side of the intersection, fill short gap in the Washington Drive sidewalk network, and install ADA-compliant curb ramp	Low	Med	Borough / County
Stirling Road at Lakeview Terrace and Hughes Lane: Install crosswalk and ADA-compliant curb ramps	Low	Med	Borough
Investigate opportunities to convert shoulders on Mountain Boulevard and Stirling Road to standard bike lanes	Low	Med	Borough / County
Install pedestrian crossing signs and ADA-compliant curb ramps at all four entry/exit locations of the traffic circle and midblock crossing to the museum	Low	Med	Borough / County
Northern segment of the circle: investigate narrowing the eastern driveway at the shopping center at the northwest corner and converting it to right-in only	Low	Med	Borough / Developer / County

Improvement	Order of Magnitude Cost (Est.)	Time Frame	Potential Partners
Investigate driveway consolidation at the Eastern segment of the circle, including the library, rescue squad, and furniture store	Low	Med	Borough / Developer / County
Complete sidewalk network around the traffic circle to improve walkability	Low	Med	Borough / County
Enhance striping within the circle to more clearly define the circle and traffic movements	Low	Med	Borough / County
Investigate tightening the curb radii and realigning the entry points to slow vehicular traffic and improve driver sight distance at the traffic circle	Low	Med	Borough / County

NOTE:

Order of Magnitude Cost tiers:

- Low: <$5M
- Medium: $5M - $25M
- High: >$25M

Time Frame tiers:

- Short: <3 year
- Med: 3-8 years
- Long: >8 years

Route 22 Corridor

Framework Plans

MEISTER AVENUE INDUSTRIAL PARKWAY

Description

Location / Branchburg Township, NJ

Principal Roadways / U.S. Route 22, Readington Rd, Meister Ave

Acreage / 916

Existing Uses / Heavy Industrial, Commercial, Residential

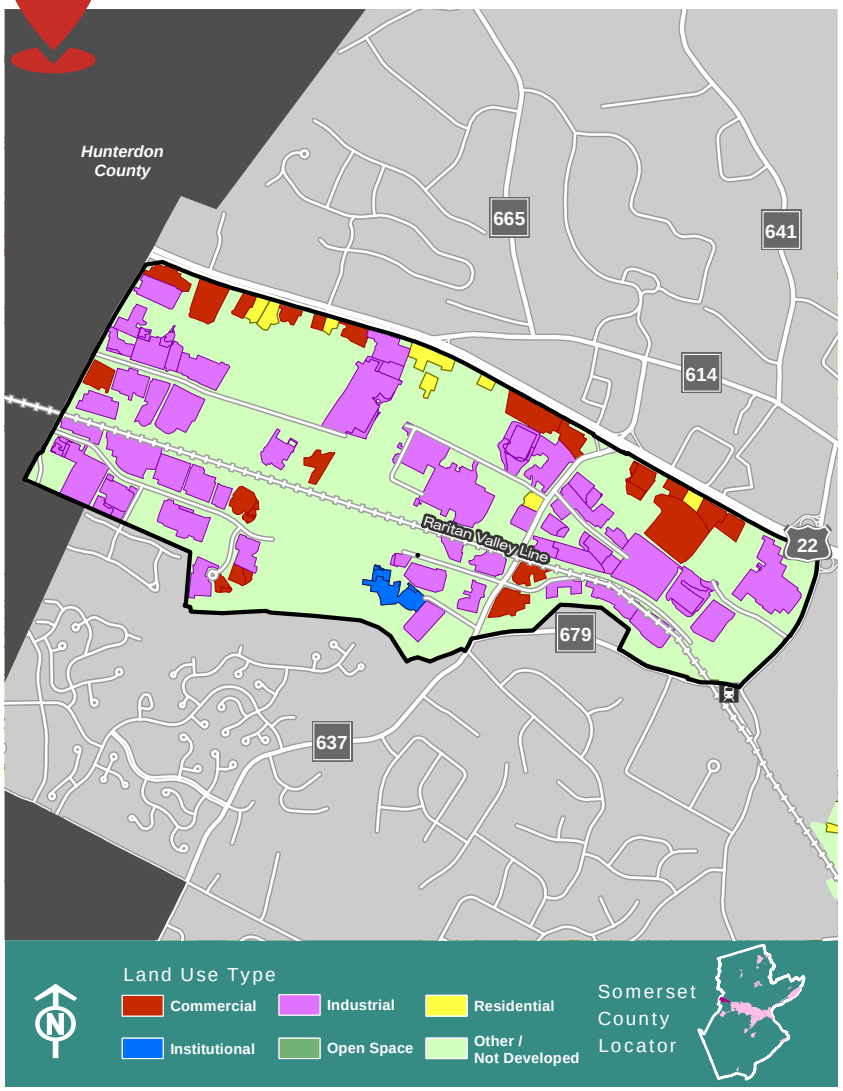
Current Zoning / Industrial (I-1 and I-3), Planned Overlay District (PO)

Complete Street Policy / No

PGIA Summary

The Meister Avenue / Industrial Parkway PGIA includes a mix of commercial, office, light industrial and other uses, but also includes various sites that are vacant or potentially redevelopable. The North Branch New Jersey Transit railroad station is located at the southeast corner of the focus area. The focus area is located south of U.S. Route 22 in a portion of Branchburg that has been the subject of planning recommendations by the Township. It is also located proximate to Raritan Valley Community College (RVCC) and to an area between the college and U.S. Route 22 (RVCC / Easton Turnpike PGIA) that was studied in the *Supporting Priority Investment in Somerset County Phase II Study*.

PGIA Map



Multi-Modal Access Metrics

Transit Access

0.24

LIMITED TRANSIT SERVICE

Network Walking Reach

0.27

SLIGHTLY WALKABLE

Access Summary

Multimodal access metrics indicate an autocentric environment. There are no NJ TRANSIT or Somerset County bus operations within the PGIA. About 40 percent of the PGIA is located within one-mile walking distance of the North Branch train station on the Raritan Valley Line. The PGIA is slightly walkable due to a low density of roadway network and limited street connectivity. A detailed analysis of the transportation infrastructure can be found in the Existing Conditions Technical Memorandum.

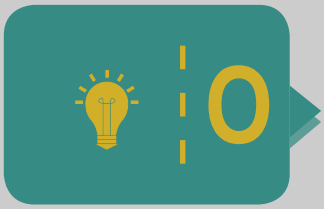
Investment Area Overview

Strengths

- Access to NJ TRANSIT's North Branch train station
- Direct access to regional highways (U.S. Route 22)
- Proximity to interstate highway and regional highways (I-78, I-287, U.S. Routes 202 and 206)
- Proximity to Raritan Valley Community College (RVCC)

Weaknesses

- High crash rates along U.S. Route 22
- No on-road bicycle facilities within the PGIA
- Limited pedestrian access due to sparse roadway network
- Branchburg Township lacks a Complete Streets policy



Opportunities

- Recommend adopting a Complete Streets policy
- Opportunity to create High-tech innovation zone complementing RVCC's efforts

Constraints

- Eleven contaminated sites within the PGIA
- Almost nine percent of the PGIA within one percent flood risk zone

Land Use and Planning Scenarios

The Meister Avenue / Industrial Parkway PGIA is adjacent to the RVCC PGIA, which was evaluated in the Supporting Priority Investment in Somerset County Phase II Study. To leverage the close proximity of the two investment areas, strategies for the Meister Avenue / Industrial Parkway PGIA seek to blend it together with the RVCC PGIA by advancing complementary land use concepts, enhancing linkages between the two PGIAs, exploring the potential for Transit Oriented Development (TOD) at a relocated North Branch station, addressing existing mobility and safety needs, and supporting and integrating the RVCC campus as both a local and regional asset.

Three alternative land use scenarios for the PGIA are described below, each of which assumes supportive circulation and mobility improvements that build upon recommendations from the *Phase II Study*. These recommendations are intended to support community master plan goals and objectives, and designed with sufficient flexibility to respond to both current and future real estate market demand.

Scenario 1

Existing Zoning

The focus area previously was located entirely in the I-1 zone. This zone's purpose is to "provide for a wide variety of industrial uses on 3-acre or larger lots." Permitted uses in this zone include various manufacturing, warehouse, research and office uses. In 2015, the Township rezoned portions of the area to implement recommendations in the Township's Master Plan. A new I-3 zone was created that broadened the mix of permitted uses to include medical offices and wholesaling, among others. The minimum lot area of 2 acres is a reduction from the I-1 zone, as are the front and side yard requirements. The purpose of this zone is "to foster more options for commercial and industrial development, including start-up businesses, by providing a wider range of permitted uses and specifically permitting shared or common commercial support facilities." The Planned Overlay (PO) zone was also created, which covers a large portion of the I-1 zone along U.S. Route 22. The intention of this zone "is to provide for limited retail, service, office and restaurant uses in a planned commercial development to realize additional business opportunities" within part of the I-1 zone. A minimum lot area of 20 acres is required in the PO zone.

Development in accordance with the current zoning for this area could therefore include a variety of nonresidential uses. This scenario assumes large-scale mixed commercial and office development in the PO zone along U.S. Route 22. Development in the remainder of the area could include a mix of small and larger scale light industrial and manufacturing uses, as well as some office development. Other than development in the PO zone, new development would not be coordinated in terms of use mix, design, or other features. Roughly one-quarter of the study area appears to be vacant or potentially redevelopable

land (e.g., existing land uses that have minimal or no improvements or could otherwise be ripe for replacement by higher value uses). Assuming 50 acres within the PO zone were redeveloped, it could yield roughly 400,000 square feet of floor area, with no more than 50 percent of it devoted to retail, restaurant and personal service space. Development of 100 acres within the I-1 and I-3 zones could result in a substantial amount of floor area devoted to light manufacturing, research, office, and similar uses, although the exact amount would vary depending on building heights and the ability to comply with parking requirements.

Scenario 2

High-Tech Innovation Zone

This scenario proposes additional light industrial and commercial development, with an emphasis on innovation that introduces smart growth elements and mobility enhancements to the current industrial and technology development pattern. This mix of uses would complement RVCC's efforts. Some of the uses permitted in each of the three existing zones would be included in this scenario, which would place less emphasis on retail and service uses. Instead, it assumes a higher percentage of research, technology, manufacturing, and office uses and supportive services. Linkages to RVCC and to existing retail and restaurants in the vicinity would be promoted to support the larger anticipated employment base. For both Scenario 2 and 3, density bonuses could be provided for construction of transportation improvements. This scenario would focus more on non-retail and service commercial development, with the amount dependent on specific uses.

Scenario 3

Mixed-Use Development

The mixed-use scenario would be more focused on the commercial uses in the PO zone, as well as the various light industrial and innovation-related uses included in Scenario 2. This scenario adds some additional development, potentially including a mix of commercial and limited upper floor residential uses. Improved connections between existing and proposed development and the RVCC campus would be promoted. This type of development could potentially increase the viability of relocating the North Branch NJ TRANSIT railroad station to the southeastern edge of the focus area. The feasibility of relocating the North Branch Station would need to be examined in detail before any decisions are made. Transportation improvements – particularly filling in missing links of the existing network – would be necessary for full buildout of this area, with developers providing such improvements in exchange for additional density. Limited residential development would be permitted in this scenario, largely as an ancillary use to commercial and office development and an opportunity to provide affordable and workforce housing.

Multimodal Transportation Improvements

A comprehensive program of mobility strategies seeks to improve access and circulation within the Meister Avenue / Industrial PGIA, and evaluate opportunities to better leverage the area's access to NJ TRANSIT rail service. In addition, the Township should adopt a Complete Streets policy to support and improve multimodal transportation. The proposed strategies address existing safety and access issues along U.S. Route 22 and build out the local and regional roadway network using street grid and intersection concepts to improve access to individual and often isolated development parcels, create value, and enhance development potential. The various mobility and safety recommendations are designed to support the land use scenarios and should be advanced regardless of the viability of the TOD elements. Improvement strategies are outlined below and illustrated on the map on the following page.

Roadway Network

The existing roadway network within the Meister Avenue / Industrial Parkway PGIA is very fragmented, with limited connectivity and access control, few examples of shared parking and cross access easements among adjacent properties, and many dead end streets. While the railroad is a barrier to north/south travel, there are opportunities to connect east/west roadways to improve circulation within the PGIA and connections between different properties or land uses.

These mobility strategies are similar to concepts proposed for the adjacent RVCC PGIA, developing an overall program to foster enhanced connectivity and circulation with new linkages and intersections, and supportive access control, shared parking, and cross access opportunities, which would create new parcels and enhance developable value.

Strategies

- Investigate new east/west roadway connections:
  - Aspen Hill Road to Columbia Road
  - East/west gap along Meister Avenue
  - East/west gap along Industrial Parkway
  - New roadway parallel to U.S. Route 22
- Investigate new north/south roadways and intersection connections to improve local connectivity and circulation and enhance access and value among the individual parcels and tracts
- Realign the intersection of Meister Avenue and Columbia Road to eliminate intersection offset in the event of a major redevelopment project


Meister Avenue / Industrial Parkway PGIA
Transportation Improvements
N
Investigate to reconfigure intersection, improving access and roadway connectivity
Promote driveway consolidation, shared parking, and cross access along U.S. Route 22 frontage
Investigate new roadways to improve connectivity
Investigate rail station relocation and TOD opportunities
Investigate bicycle lanes along Readington Road (CR 637)
Potential Improvements
Bicycle Lane
Intersection Realignment
Road Connection
Train Station Relocation
Tannery Rd
County Line Rd
Meister Ave
Meister Ave
Chatham Rd
Azalea Ter
Magnolia Ln
Culnen Dr
Industrial Pkwy
Industrial Pkwy
Columbia Rd
Aspen Hill Rd
Campus Dr
Central Pl
Miller Ave
Tanglewood Dr
Wren Way
Stony Brook Rd
River Road
665
641
614
22
679
637

- Investigate designating the existing shoulder on Readington Road/RVCC Drive as a bicycle lane, improving bicycle access to the RVCC campus
- Investigate realignment and reconfiguration of the Easton Turnpike intersection at U.S. Route 22 in order to provide a north/south connection to the Meister Avenue PGIA
- Investigate access control improvements along U.S. Route 22, including opportunities for driveway consolidation, cross access easements, and shared parking

Train Access

The proximity of the NJ TRANSIT rail service within the PGIA provides an opportunity to enhance multimodal access and mobility. The existing North Branch station, at the southeast corner of the PGIA, has poor connections to the surrounding area (especially to the east, including Bridgewater) and modest parking capacity. Redevelopment of the PGIA, particularly in conjunction with a mixed-use strategy (Scenario 3), should investigate improvements to rail access to leverage proximity to this major resource.

Transit Oriented Development Opportunities in Somerset County (2005) included an extensive assessment of North Branch Station and opportunities for station area development and enhancement. Key findings and recommendations included:

- Expansion of existing station is not possible at current location due to a variety of constraining factors
- Relocation and/or redevelopment of station would require substantial investment, most likely via public-private partnership (PPP)
- Gateway opportunity(s) and traffic calming along Readington Road
- Mixed-use development should be concentrated at a new station location and integrated with both natural features and RVCC
- Create new neighborhoods to support TOD concept
- Density will be determining factor in viability of TOD options
- Area redevelopment should investigate a technology/research focus. The *Phase III Study* land use scenario(s) are consistent with this approach

Strategies

Transit enhancements should investigate opportunities to advance the recommendations of the TOD Study, including relocating the North Branch Station to the vicinity of Readington Road. This location would put it in closer proximity to existing residential development and the RVCC campus, provide opportunities for TOD surrounding the station area, and provide opportunities to expand station parking capacity.

Improvement	Order of Magnitude Cost (Est.)	Time Frame	Potential Partners
Meister Avenue / Industrial Parkway PGIA			
Roadway Network			
Investigate new roadway connection from Aspen Hill Road to Columbia Road	Med	Med	Township / Developer
Investigate new roadway connection to fill east/west gap along Meister Avenue	Med	Med	Township / Developer
Investigate new roadway to fill east/ west gap along Industrial Parkway	Med	Med	Township / Developer
Investigate designating the existing shoulder on Readington Road/RVCC Drive as a bicycle lane	Low	Med	County
Investigate access control improvements along U.S. Route 22	Low	Med	Township / NJDOT
Investigate new east/west roadway parallel to U.S. Route 22	Med	Long	Township / Developer
Realign the intersection of Meister Avenue and Columbia Road to eliminate intersection offset	Med	Long	Township / Developer
Investigate realignment/reconfiguration of the Easton Turnpike intersection at U.S. 22, providing a north/south connection to the Meister Avenue PGIA	Med	Long	Township / County / NJDOT
Investigate new north/south roadways and intersection connections to improve local connectivity and circulation	Med	Long	Township / NJDOT / Developer
Train Access			
Relocation / redevelopment of station via public-private partnership (PPP)	High	Long	Township / NJ TRANSIT / Developer
Gateway opportunity(s) and traffic calming along Readington Road	Med	Med	County

NOTE:

Order of Magnitude Cost tiers:

- Low: <$5M
- Medium: $5M - $25M
- High: >$25M

Time Frame tiers:

- Short: <3 year
- Med: 3-8 years
- Long: >8 years

GREEN BROOK ROUTE 22 CORRIDOR

Description

Location / Green Brook, NJ

Principal Roadways / U.S. Route 22, CR-529, Warrenville Road

Acreage / 321

Existing Uses / Commercial Corridor, Light Industrial

Current Zoning / Regional Highway Commercial (RHC)

Complete Street Policy / No

PGIA Summary

The focus area in Green Brook for this study is the Route 22 corridor. This portion of the highway is somewhat unique for Somerset County in that it is covered by a single zoning district (RHC Regional Highway Commercial zone) along its entire frontage through the municipality, which is over three miles in length. However, the size and depth of properties along the corridor vary greatly, as does the quality of development. There are also several vacant parcels in the focus area. The shallow depth of some lots, steep slopes of the First Watchung Mountain along the north side of Route 22, and stream corridor and residential areas bordering the south side limit roadway and development options.

PGIA Map

Multi-Modal Access Metrics

Transit Access

0.08

LIMITED TRANSIT SERVICE

Network Walking Reach

0.29

SLIGHTLY WALKABLE

Access Summary

Multimodal access metrics indicate an autocentric environment along the Route 22 corridor. There is NJ TRANSIT bus service in the PGIA, but only one percent of the PGIA is within one mile of NJ TRANSIT's Dunellen Train station. The PGIA is slightly walkable due to a low density of the roadway network and limited street connectivity. A detailed analysis of the transportation infrastructure can be found in the Existing Conditions Technical Memorandum.

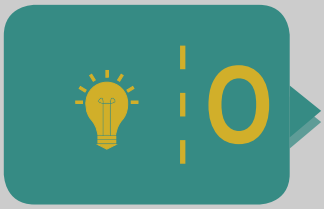
Investment Area Overview

Strengths

- Direct access to Route 22
- Diverse and affordable community
- Recent implementation of Washington Avenue road diet supportive of goals for redevelopment and infill consistent with local context

Weaknesses

- Not very walkable
- Not well served by public transit
- Limited roadway network
- Many small parcels, and single use driveways along Route 22
- Posted speed limit of 55 mph not consistent with development profile of small, distinct parcels and many driveway access points



Opportunities

- Parcel consolidation and assembly for future development
- Driveway and access consolidation along Route 22 to enhance multimodal safety and access along busy highway corridor
- Part of upcoming regional TOD study sponsored by NJTPA
- Master Plan reexamination underway
- Renewable energy and green stormwater elements as incentives
- The single RHC zone provides the opportunity for far-reaching, corridor-wide change through a single zoning amendment

Constraints

- Steep terrain just to the north of the Route 22 corridor limits the number of access points to the PGIA from the north
- Stream corridors and sensitive lands
- Many of the small streets are dead ends and require returning to Route 22
- All of these issues constrain ability to enhance roadway network

Top: The Green Brook Route 22 Corridor PGIA includes many smaller parcels, each with their own driveways, resulting in numerous access points along the corridor.

Middle: The corridor generally lacks pedestrian accommodations, although several intersecting streets provide sidewalk connections to adjacent neighborhoods.

Bottom: The corridor is characterized by small parcels with minimal cross-access.

Land Use and Zoning Scenarios

Several options for zoning enhancements for the Green Brook PGIA are outlined below. These changes focus on updating bulk zoning requirements for the existing regional highway commercial (RHC) zone and encouraging parcel assemblage to allow larger scale redevelopment. Three hypothetical redevelopment scenarios illustrate how these changes can impact redevelopment potential and site design flexibility for a hypothetical 3.2 acre site on Route 22.

Initial Recommendations

- Consider modifying bulk standards for the RHC zone to allow more flexibility in development design. Reducing the minimum front and rear yard standards, for example, while maintaining maximum building coverage at or near its current level would not increase development yield dramatically, but would provide more options for building locations (see sidebar to right). Additional changes could include development incentives in exchange for the use of green building techniques, renewable energy, or similar measures.
- Encourage the assemblage of parcels with frontage on U.S. Route 22 where possible to allow for larger scale development. Development standards could vary based upon lot area, for example by permitting greater building coverage for larger properties.
- Provide new standards for service stations, and potentially associated convenience stores, in line with current development trends. Separate this use from "public garage" regulations, which are intended for motor vehicle repair establishments.
- Reduce minimum parking standards for certain uses, in particular banks, shopping centers, supermarkets, and possibly other retail uses.
- Mitigate concerns about density impacts changes by modifying landscaping and buffering standards and adding circulation requirements to the RHC zone.
- Update the conditional use standards for hotels, such as allowing taller hotel buildings as long as certain conditions are met, and potentially on smaller sites (see sidebar).

Potential Amended RHC Zone Bulk Standards

- Minimum lot area: 20,000 sf
- Minimum lot width: 100 ft
- Minimum front yard: 25 ft
- Minimum rear yard: 25 ft
- Minimum side yard: 20 ft
- Maximum building coverage: 25% (lots < 40,000 sf), 35% (lots 40,000 to 59,999 sf), 40% (lots ≥ 60,000 sf)
- Maximum lot coverage: 70% (lots ≤ 40,000 sf), 80% (lots ≥ 40,000 sf), with additional 5% for utilization of green building techniques and renewable energy
- Maximum building height: 35 ft
- Minimum parking spaces for lots ≥ 60,000 sf: 1 per 250 sf floor area

Potential Revised/Additional Hotel Conditional Use Standards

- Minimum lot area: 30,000 sf
- Minimum lot width: 200 ft
- Minimum front yard: 40 ft
- Minimum rear yard: 50 ft
- Minimum side yard: 25 ft
- Maximum building height: 4 stories/50 ft
- Minimum # of guest rooms: 40
- Minimum parking spaces: 1.2/guest room
- All guest rooms shall only be accessible from an interior corridor

Scenario 1

Baseline Zoning

Under the existing RHC zoning, approximately 41,000 square feet of retail space could be constructed on the hypothetical 3.2 acre demonstration site, along with 209 associated surface parking spaces, per the current minimum parking requirements of 1 space per 200 square feet of retail space. This buildout also meets the existing RHC bulk requirements of 30% building coverage and 80% impervious coverage.

Existing RHC Zoning

- 41,836 sf retail
- 209 parking spaces (1 per 200 sf)
- Total parking area required: 66,937 sf
- Maximum building coverage: 30%
- Maximum impervious coverage: 80%
- Maximum building height: 35 ft

Scenario 2

Amended Zoning - Enhanced Density Incentives

The second scenario proposes modifying bulk standards for the RHC zone to allow more flexibility and density in development and design options. In order to encourage parcel assemblage, scenario 2 permits slightly denser buildout by increasing the maximum permitted building coverage standard and slightly reducing the parking requirements. By increasing the maximum permitted building coverage from 30% to 35% and reducing the parking requirement to 1 space per 250 square feet of retail space, approximately 48,000 square feet of retail space with 195 parking spaces could be constructed. This represents an increase of about 15% in total development square footage.

Amended Zoning - Larger Properties

- 48,809 sf retail
- 195 parking spaces (1 per 250 sf)
- Total parking area required: 62,475 sf
- Maximum building coverage: 35%
- Maximum impervious coverage: 80%
- Maximum building height: 35 ft

Scenario 3

Amended Zoning - Green Building Incentives

Additional density and coverage are permitted compared to scenario 2 as an incentive to incorporate green building strategies, such as renewable energy units or innovative stormwater techniques. With 40% building coverage and 85% impervious coverage, approximately 52,000 square feet of retail space could be constructed with 207 parking spaces (1 per 250 square feet). This represents an increase of almost 27% in total development square footage compared to the baseline zoning conditions, with appropriate coverage standards still met.

Amended Zoning - Green Building Incentives

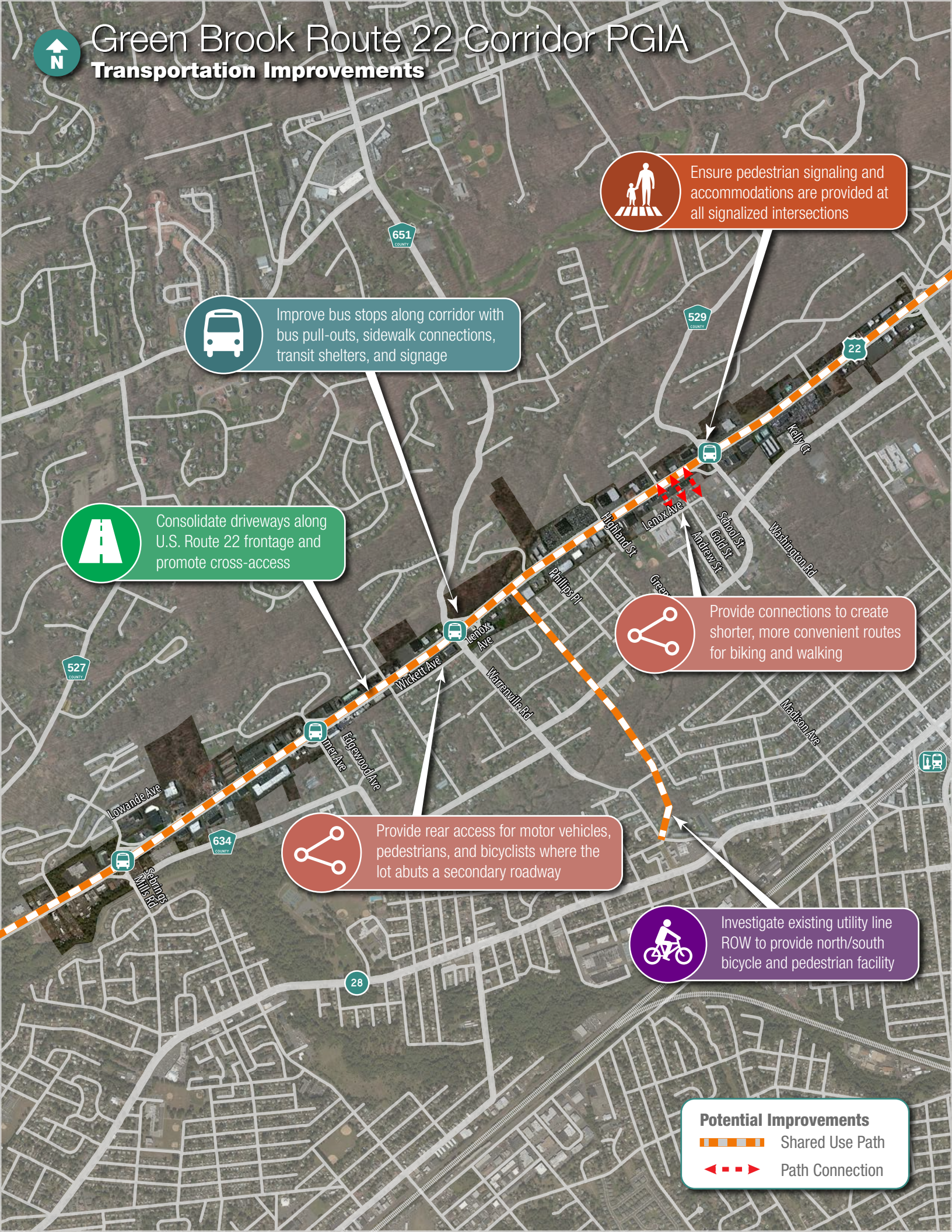
- 51,800 sf retail
- 207 parking spaces (1 per 250 sf)
- Total parking area required: 66,304 sf
- Maximum building coverage: 40%
- Maximum impervious coverage: 85%
- Maximum building height: 35 ft

Multimodal Transportation Improvements

The narrow U.S. Route 22 corridor is restricted by the topographical constraints of the First Watchung Mountain to the north and stream corridors and residential neighborhoods to the south, which limit opportunities for significant transportation improvements. Strategies are focused instead on supporting commercial redevelopment options, parcel assembly, and lower parking requirements by enhancing non-motorized access and connectivity, and incentives for driveway consolidation and shared parking along the corridor. Improvement strategies are outlined below and illustrated on the map on the following page.

Transportation Scenarios

- Consolidate driveways along U.S. Route 22 frontage and promote cross-access agreements, shared parking, and improved internal circulation. These changes can be accomplished through lot assemblage and/or cross-access agreements with adjoining parcels. Driveway consolidation will reduce conflict points along U.S. Route 22, a high crash corridor. Cross-access and internal circulation improvements will help mitigate demand for short trips on U.S. Route 22 to access neighboring businesses.
- Install shared-use paths along U.S. Route 22 to accommodate both bicyclists and pedestrians. Because the roadway is a barrier-divided highway with few crossing opportunities, a facility is required on both sides of the roadway.
- Install pedestrian signals with countdown timers, pedestrian push buttons, and crosswalks at all signalized intersections of U.S. Route 22
- Provide rear access for motor vehicles, pedestrians, and bicyclists where the lot abuts a secondary roadway (e.g., Greenbrook Road, Wickett Avenue) to improve network connectivity and access options. Rear driveways should be designed to permit local access but deter potential illegal cut through vehicular movements between U.S. Route 22 and the secondary roadway.
- Provide bicycle and pedestrian connections between U.S. Route 22 development and abutting local residential streets (e.g., Andrew Street, Gold Street, School Street, etc)
- Investigate opportunities to utilize the existing utility line ROW to provide a north/south bicycle and pedestrian facility, potentially connecting the corridor south to Dunellen and NJ Route 28
- Improve bus stops along the corridor with bus pull-outs, sidewalk connections, transit shelters, and signage


Green Brook Route 22 Corridor PGIA
Transportation Improvements
N
Ensure pedestrian signaling and accommodations are provided at all signalized intersections
Improve bus stops along corridor with bus pull-outs, sidewalk connections, transit shelters, and signage
Consolidate driveways along U.S. Route 22 frontage and promote cross-access
Provide connections to create shorter, more convenient routes for biking and walking
Provide rear access for motor vehicles, pedestrians, and bicyclists where the lot abuts a secondary roadway
Investigate existing utility line ROW to provide north/south bicycle and pedestrian facility
651
529
22
527
634
28
Kelly Ct
Highland St
Lenox Ave
School St
Gold St
Andrew St
Washington Rd
Phillips Pl
Wickett Ave
Warrenville Rd
Madison Ave
Meir Ave
Edgewood Ave
Lowande Ave
Sebrings Mills Rd
Potential Improvements
Shared Use Path
Path Connection

Improvement	Order of Magnitude Cost (Est.)	Time Frame	Potential Partners
Green Brook Route 22 Corridor PGIA			
Adopt Complete Streets policy	Low	Short	Town
Install shared-use paths along U.S. Route 22 to accommodate both bicyclists and pedestrians	Low	Long	NJDOT
Install pedestrian signals with countdown timers, pedestrian push buttons, and crosswalks at all signalized intersections of U.S. Route 22	Low	Long	NJDOT
Provide rear access for motor vehicles, pedestrians, and bicyclists where the lot abuts a secondary roadway (Greenbrook Road, Wickett Avenue) to improve network connectivity and access options	Med	Long	Developer / Property Owner / Town
Provide bicycle and pedestrian connections between U.S. Route 22 development and abutting local residential streets (e.g., Andrew Street, Gold Street, School Street, etc)	Low	Long	Developer / Town
Investigate opportunities to utilize the existing utility line ROW to provide a north/south bicycle and pedestrian facility, potentially connecting the corridor south to Dunellen and NJ Route 28	Low	Long	Town / Utility Company
Improve bus stops along the corridor with bus pull-outs, sidewalk connections, transit shelters, and signage	Low	Long	NJ TRANSIT
Consolidate driveways along U.S. Route 22 frontage and promote cross access agreements, shared parking, and improved internal circulation	Med	Long	Town / Property Owner / Developer

NOTE:

Order of Magnitude Cost tiers:

- Low: <$5M
- Medium: $5M - $25M
- High: >$25M

Time Frame tiers:

- Short: <3 year
- Med: 3-8 years
- Long: >8 years

NORTH PLAINFIELD TOWN CENTER

Description

Location / North Plainfield Borough, NJ

Principal Roadways / U.S. 22, CR-521, CR-636, CR-642, CR-649

Acreage / 1,806

Existing Uses / Residential, Commercial Corridors

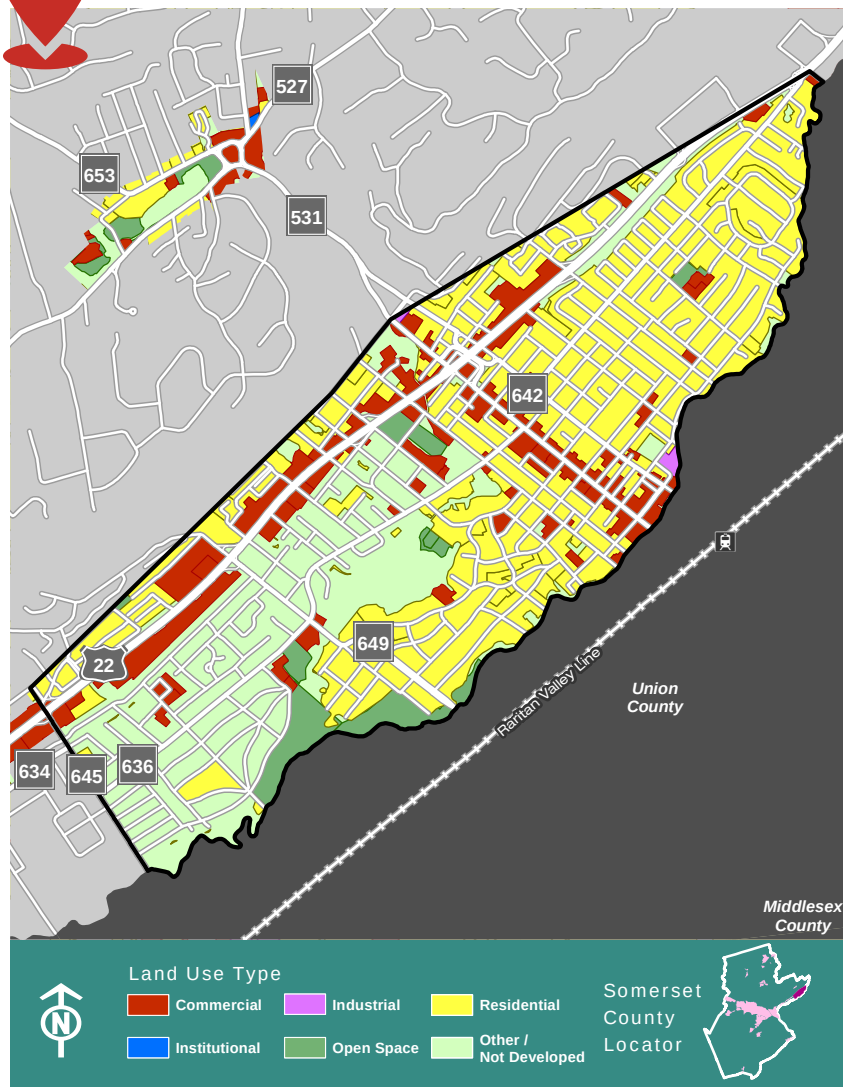
Current Zoning / Business (B-1, B-3)

Complete Streets Policy / Yes

PGIA Summary

The PGIA includes the entire Borough. There has been development activity in recent years, particularly along Route 22. North Plainfield also has been actively upgrading its roads and sewer infrastructure. Based on discussion with municipal stakeholders, the primary area of focus is the Old Mill site and vicinity. This property is located just east of downtown, across the Green Brook from Plainfield. Old Mill site was identified in the Borough's most recent Master Plan as a potential redevelopment opportunity, and the site is also included in a designated area in need of rehabilitation, along with a large portion of the south/central section of the municipality.

PGIA Map



Multi-Modal Access Metrics

Transit Access

0.46

MODERATE TRANSIT SERVICE

Network Walking Reach

0.41

SLIGHTLY WALKABLE

Access Summary

Multimodal access metrics indicate a mix of transportation options. There is NJ TRANSIT bus service within the PGIA. NJ TRANSIT's Plainfield train station is within a quarter mile of the PGIA, and the Netherwood and Dunellen train stations are within one mile. North Plainfield's downtown area is a walkable node; however, the broader PGIA is slightly walkable due to a lower density of roadway network and more limited connectivity outside of the town center. A detailed analysis of the transportation infrastructure can be found in the Existing Conditions Technical Memorandum.

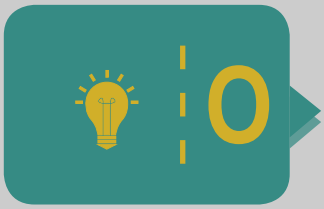
Investment Area Overview

Strengths

- Traditional and walkable downtown core
- Well-defined downtown street grid
- Proximity to NJ TRANSIT Plainfield station
- NJ TRANSIT bus service
- Direct access to regional highway (U.S. Route 22)
- Borough has a Complete Streets policy

Weaknesses

- Crash rates along U.S. Route 22 exceed the statewide average for similar roadways along most of the corridor
- Pedestrian crash history along Somerset Street and Watchung Avenue
- Auto-centric access along U.S. Route 22 corridor
- Small/medium size lots, numerous access points along U.S. Route 22



Opportunities

- Repurpose obsolete and underutilized Old Mill industrial site
- Advance areas identified for redevelopment/in need of rehabilitation by 2014 Borough Master Plan
- Restore the Green Brook stream corridor as open space, recreational area, and aesthetic feature
- Consolidate access along U.S. Route 22

Constraints

- Flood issues along the Stony Brook and southern portion of the Green Brook stream corridors. Almost 19 percent of the PGIA in 1 percent flood risk zone
- The Green Brook stream corridor limits access opportunities from the southeast
- Steep slopes north of U.S. 22 precludes network and access improvements

Land Use and Planning Scenarios

While the PGIA spans the entire Borough, this framework plan focuses primarily on examining redevelopment opportunities for the Old Mill site and vicinity. Located just east of downtown and adjacent to the Green Brook, this area was identified in the Borough's most recent master plan as a potential redevelopment opportunity and is in a designated area in need of rehabilitation. The land use planning also examines opportunities to update the existing B-3 zoning requirements along Route 22, where recent redevelopment activity has occurred.

Focus Area: B-3 Zone

The B-3 zone along Route 22 permits a range of commercial uses, including retail, office, restaurants, banks, service stations and motels. There is no minimum lot area requirement; however, a minimum lot width of 150 feet is required, as is a 50-foot front yard. The regulations for this zone are generally appropriate for a developed highway corridor.

Initial Recommendations for B-3 Zone

- Service station standards should be updated to be less focused on auto repair, or to provide for an additional use for a service station with a convenience store (instead of auto repair). The gasoline/convenience zone has seen significant change and many local ordinances need updating to mitigate the need for variances and extensive land use review
- Current regulations cover automobile sales in the public garage category, and this can be updated to better address larger scale auto sales establishments
- Motel regulations do not address current trends in hotel design, notably building height. Consideration could be given to allowing taller hotel buildings with interior room access and amenities, and potentially on smaller sites

Focus Area: Old Mill Site

The Old Mill property represents a significant redevelopment opportunity, given its size and location. The Borough's 2014 Master Plan recommends that this parcel be redeveloped with multi-family residential use, including an affordable housing component, which "would facilitate rehabilitation efforts in the central portion of the Borough and serve as a catalyst for revitalization of local businesses and commercial services in the downtown area."

Consideration should be given to including some nearby properties in a potential redevelopment project in order to improve the streetscape and connections to downtown, particularly along the Green Brook if properties between it and Pearl Street are added. The mix of uses could also be broadened in an expanded area, as new retail and restaurant space would be appropriate toward Watchung Avenue. While the site is located a reasonable

distance from the Plainfield train station, adequate parking should be provided for any new uses, taking full advantage of shared parking opportunities.

Existing B-1 zoning permits apartment buildings on lots 40,000 square feet in area or greater, subject to certain conditions, as well retail uses, but not in the same building. Therefore existing zoning would permit development of the type contemplated. A redevelopment plan could provide additional regulations, notably for building design and streetscaping, which are not covered by zoning.

Initial Recommendations for Old Mill Site and Vicinity:

- Encourage redevelopment of Old Mill site and potentially additional properties to the south along Pearl Street, either in accordance with existing zoning or through a redevelopment plan with additional regulations
- Encourage the Green Brook to be an asset as part of a redevelopment, and potentially require provision of a walkway along the waterway
- Utilize green infrastructure as part of development design to mitigate stormwater impacts of development along the Green Brook
- Provide zoning incentives to promote desirable features such as green infrastructure, lot consolidation, pedestrian amenities, and a higher percentage of nonresidential development
- Consider investigating whether the expanded area qualifies as an "area in need of redevelopment," which would provide the municipality with additional tools to promote redevelopment
- Require adequate parking and permit shared parking for multiple uses, including credit for utilizing on-street and/or off-site, off-street parking
- Provide green building and site design requirements for any redevelopment project

Scenario 1

Old Mill Site Only, Existing Zoning

Scenario 1 includes only multi-family residential on the Old Mill site, consistent with existing zoning. As noted, the B-1 zoning permits apartment buildings on lots at least 40,000 square feet in area. Buildings must be either four or five stories in height. Maximum permitted density is calculated using minimum lot area per dwelling unit, which varies depending on unit type (e.g. number of bedrooms) and building height. The existing lot is approximately 108,900 square feet in area. After considering the maximum permitted density and height regulations, this scenario projects that 78 dwelling units in a four-story building could be constructed. This type of dwelling could provide an opportunity for new workforce and affordable housing.

Scenario 1: Existing B-1 Zoning, Old Mill only

- 66,507 sf residential, 78 residential units
- Total parking area required: 40,449 sf
- Total parking spaces required: 126
- 16,627 sf building footprint
- Maximum impervious coverage: 80%
- Site FAR: 0.61

Scenario 2

Old Mill Site and Surrounding Areas, Mixed Use Option A

Scenario 2 includes the properties along Pearl Street and the Green Brook, and adds commercial space to the mix. The development height and density would be similar to existing zoning. Apartment dwellings would provide an opportunity for new workforce and affordable housing, with its economic viability enhanced due to the larger site area and the addition of commercial space. The added land area could allow for the creation of a green space, such as a pocket park, as part of the project. The development could also utilize its location along the stream corridor as an asset. Development regulations could require the provision of a walkway along the Green Brook. For this and the next scenario, parking regulations should take into account the mix of uses and provide credit for shared parking between uses, which would reduce the amount of land taken up by parking and reduce development costs and impervious cover.

Scenario 2: Mixed Use - Residential/Commercial, More Density

- 86,459 sf residential, 101 residential units
- 10,000 sf retail
- Total parking area required: 62,183 sf
- Total parking spaces required: 194
- 34,115 sf building footprint
- Maximum impervious coverage: 80%, Site FAR: 0.68

Scenario 3

Old Mill Site and Surrounding Areas, Mixed Use Option B

Scenario 3 is for this expanded area as well, with a greater amount of commercial space as part of a mixed-use development. In the third scenario, it is anticipated that a sizable commercial space would be provided along Watchung Avenue, with additional retail on the ground floor along Pearl Street and facing the Green Brook. If there is interest in this type of redevelopment, additional properties in the immediate area could be redeveloped in a similar fashion. Density bonuses for lot consolidation or assembly could encourage this type of mixed-use development – again, with workforce and/or affordable housing provided. Improvements to pedestrian, bicycle, and vehicular networks should be undertaken to support these efforts.

Scenario 3: Mixed Use- Residential/Retail, More Commercial

- 66,507 sf residential, 78 residential units
- 30,000 sf retail
- Total parking area required: 64,449 sf
- Total parking spaces required: 201
- 54,127 sf building footprint
- Maximum impervious coverage: 80%
- Site FAR: 0.68

Multimodal Transportation Improvements

The proposed redevelopment scenarios of the Old Mill site provide a unique opportunity to repurpose a currently obsolete and under-utilized parcel, leveraging its walkability with convenient access to downtown North Plainfield and Plainfield and train service to Newark and New York. Improvement strategies are outlined below and illustrated on the map on the following page.

Reclaiming the Green Brook Stream Corridor

The Old Mill site provides an opportunity to initiate access improvements along a significant segment of the Green Brook. Initial strategies are described below. Future redevelopment along the stream corridor and coordination with Plainfield would provide additional opportunities to extend the proposed greenway.

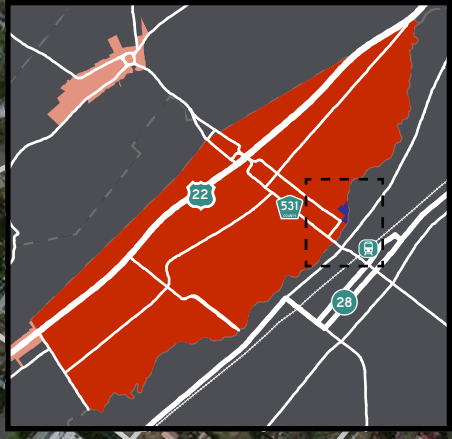
- Incorporate a pedestrian path along the west bank of the Green Brook into redevelopment plans for the Old Mill site and Pearl Street. The path would open up the Green Brook to public access and create a linear park between Roosevelt Avenue and Watchung Avenue, providing an amenity for potential tenants and the surrounding neighborhood
- Investigate opportunities to extend the path along Brook Avenue to Sandford Avenue, where private development does not limit greenway access
- Integrate green stormwater features into redevelopment site design to mitigate impervious cover; slow, capture, and treat flows on-site; and buffer run-off from flowing directly into the Green Brook

Transportation and Streetscape Improvements

- Implement streetscape improvements along Watchung Avenue, particularly in the segment between Manning Avenue and the Green Brook, such as:
  - » Curb extensions at intersections to calm traffic, shorten crossings, and provide opportunities for green infrastructure
  - » Streetscape elements similar to Somerset Street, including pedestrian lighting
- Install/repair sidewalk along Pearl Street and Brook Avenue
- Implement wayfinding signage along Somerset Street and Watchung Avenue to highlight the location of major destinations, encourage walking, and identify public parking for motorists
- Update zoning and site design guidelines to include green infrastructure elements as default considerations and require bicycle parking for new development

North Plainfield Town Center PGIA

Transportation Improvements



Investigate revitalizing the Green Brook as an amenity, integrating it into redevelopment as a greenway with paths and green infrastructure

Improve streetscape, similar to CR 531, with traffic calming, improved pedestrian crossings, and pedestrian lighting

Belmont Ave
Norwood Ave
Sandford Ave
Westervelt Ave
Delacy Ave
642
Summit Ave
Watchung Ave
Brooks Ave
Ghatham Pl
Orange Pl
Roosevelt Ave
Fairview Ave
Jackson Ave
Manning Ave
Race St
Harmony St
Chatham St
Warren St
Pearl St
Linden Ave
531
Park Pl
Vine St
Duer St
Lincoln Pl
Church St
620
Craig Pl
W 2nd St
State Hwy 28

Old Mill Focus Area

Potential Improvements

Streetscape Improvements

Sidewalk Improvements

Path Connection

Green Brook Greenway

Improvement	Order of Magnitude Cost (Est.)	Time Frame	Potential Partners
North Plainfield Town Center PGIA			
Implement wayfinding signage along Somerset Street and Watchung Avenue	Low	Short	Borough
Update zoning and site design guidelines to include green infrastructure elements as default considerations and require bicycle parking for new development	Low	Med	Borough
Incorporate a pedestrian path along the west bank of the Green Brook into redevelopment plans for the Old Mill site and Pearl Street	Low	Long	Borough / Developer
Investigate opportunities to extend the path along Brook Avenue to Sandford Avenue	Low	Long	Borough
Integrate green stormwater features into redevelopment site design	Low	Long	Borough / Developer
Implement streetscape improvements including curb extensions, green infrastructure and pedestrian lighting along Watchung Avenue between Manning Avenue and the Green Brook	Low	Long	Borough
Install/repair sidewalk along Pearl Street and Brook Avenue	Low	Long	Borough / Developer

NOTE:

Order of Magnitude Cost tiers:

- Low: <$5M
- Medium: $5M - $25M
- High: >$25M

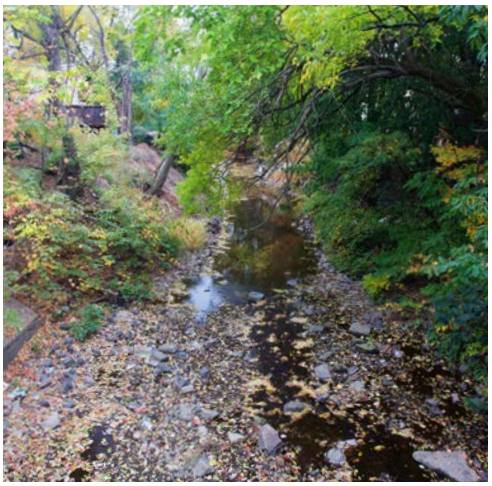
Time Frame tiers:

- Short: <3 year
- Med: 3-8 years
- Long: >8 years

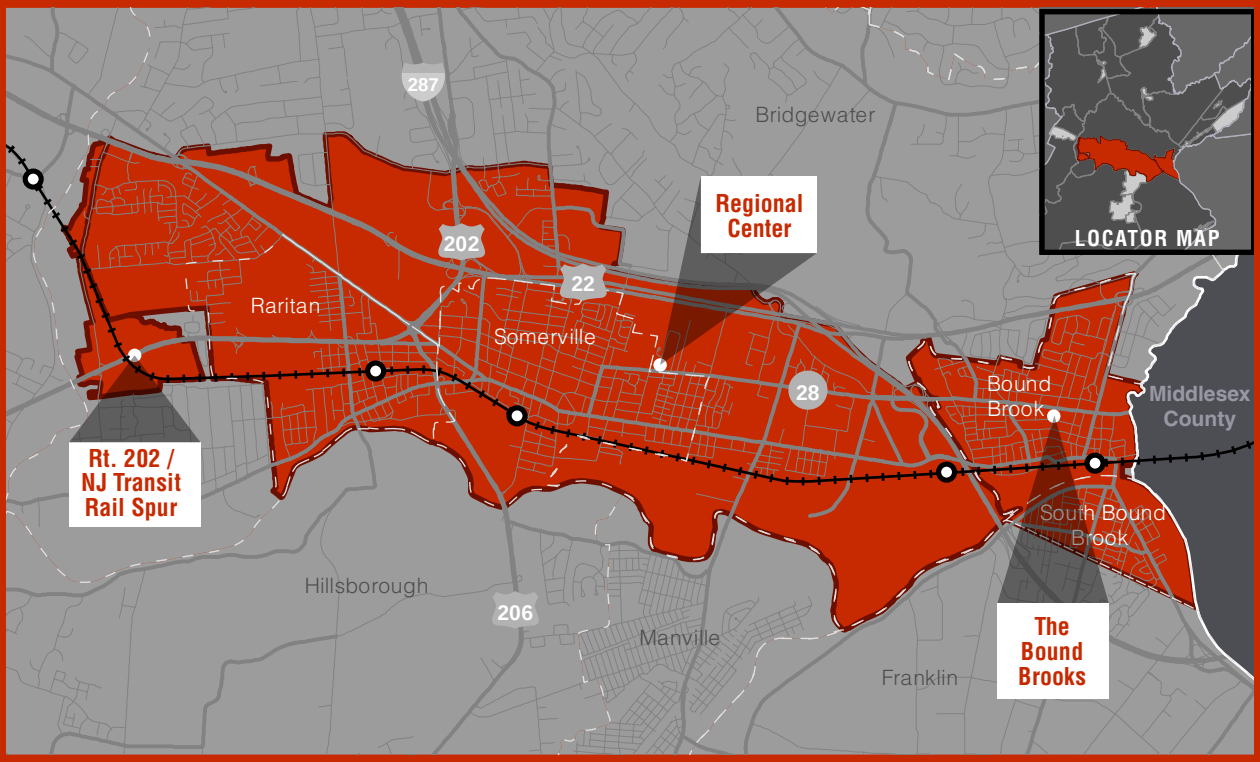
Top: Old Mill focus area along Brook Avenue

Middle / Bottom Right: Existing pedestrian-friendly streetscape along the Somerset Street business district

Bottom Left: Existing Green Brook stream corridor



Regional Center
Framework Plans



ROUTE 202 NJ TRANSIT RAIL SPUR

Description

Location / Bridgewater Township, NJ

Principal Roadways / U.S. 202, Milltown Rd

Acreage / 343

Existing Uses / Residential, Commercial, Industrial

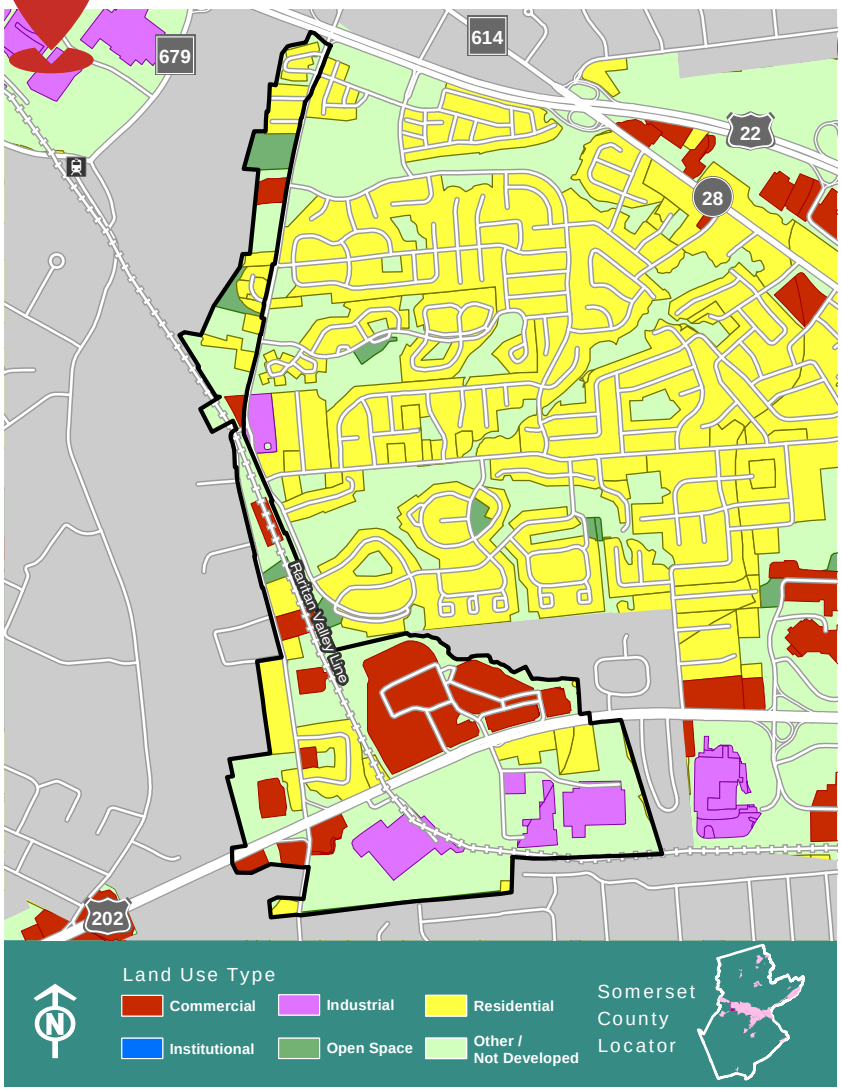
Current Zoning / Limited Manufacturing (M-1), Neighborhood Business (C-1), Office and Service (C-3), Public/Community Service (P-2), Multi-Family Residential (R-MDU-5)

Complete Streets Policy / No

PGIA Summary

The Route 202 / NJ TRANSIT Rail Spur PGIA is a narrow corridor along the western edge of Bridgewater that links Bridgewater with Branchburg to the west, Raritan to the south, and Somerville to the east. There are a mix of residential, recreational and open space, and commercial land uses in the PGIA. The Raritan River is a barrier to access the PGIA from the west. The NJ TRANSIT rail line is a barrier to east/west connectivity between residential neighborhoods and North Branch Park. While adjacent to the NJ TRANSIT Raritan Valley Line, the PGIA is not directly served by transit. The PGIA is also in close proximity to the proposed Raritan River Greenway network, providing opportunities to enhance regional bicycle and pedestrian connections.

PGIA Map



Multi-Modal Access Metrics

Transit Access

0.12

LIMITED TRANSIT SERVICE

Network Walking Reach

0.29

SLIGHTLY WALKABLE

Access Summary

Multi-modal access metrics indicate an autocentric environment across the PGIA. There are no NJ TRANSIT or Somerset County bus operations within the PGIA. The NJ TRANSIT Raritan Valley Line's North Branch Station is adjacent to the PGIA but not directly accessible. The PGIA is slightly walkable due to a low density of roadway network and limited street connectivity. A detailed analysis of the transportation infrastructure can be found in the Existing Conditions Technical Memorandum.

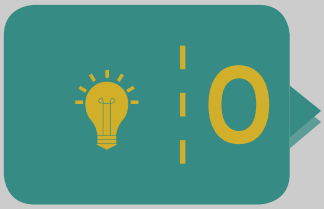
Investment Area Overview

Strengths

- Direct access to regional highways (U.S. Route 22, U.S. Route 202)
- Proximity to NJ TRANSIT's North Branch and Raritan train stations
- Access to Regional Center Greenway

Weaknesses

- High crash rates along U.S. Route 202 and at the intersection of Milltown Road and U.S. Route 202
- Lack of local and regional bus service along Route 202
- No on-road bicycle facilities within the PGIA
- Lack of local road connectivity to destinations outside the PGIA
- Bridgewater Township lacks a Complete Streets policy



Opportunities

- A bicycle and pedestrian bridge over the Raritan River at North Branch Park to improve access
- Enhancements for the Milltown Road tunnel under the Raritan Valley Line for two-way traffic and safe bicycle and pedestrian access
- Recommend Bridgewater Township to adopt a Complete Streets policy
- Proximity to the Raritan River Greenway

Constraints

- Access to the PGIA from the west is limited by the Raritan River
- The Raritan Valley NJ TRANSIT Line is a barrier to east/west mobility within the PGIA
- Southern portion of the PGIA has groundwater contamination and three contaminated sites

Multimodal Transportation Improvements

Future efforts should include investigation of transit village opportunities for Bridgewater within the U.S. Route 202 / NJ TRANSIT Rail Spur PGIA area. Transit service along the Raritan Valley line in Bridgewater would increase property values for both residential and commercial properties and provide enhanced mobility options for local residents and businesses. Numerous barriers currently constrain transportation improvement options including the adjacent Raritan River and NJ TRANSIT rail line, with limited crossings of each. Site development, particularly along U.S. Route 202, also limits connectivity between residential, commercial, and retail locations, and opportunities to enhance vehicular access are limited. Recommendations for this PGIA in the short term are therefore focused primarily on improved multimodal mobility and connectivity. Improvement strategies are outlined below and illustrated on the map on the following page.

Improve Multimodal Connectivity

A key element of the transportation improvements is to address existing connectivity issues in the PGIA area. Rather than isolated, standalone projects, these improvements are part of an integrated network that will connect people with destinations: work, shopping, entertainment, parks and recreation, and a variety of activities, amenities, and services. Potential improvements include:

- Investigate enhancements for the Milltown Road tunnel under the Raritan Valley Line to allow two-way traffic and safe bicycle and pedestrian access. Potential alternatives include widening the existing tunnel to accommodate two-way traffic and all modes, or create a one-way pair by constructing a second tunnel wide enough to accommodate a single vehicular lane as well as bicyclists and pedestrians (approximately 20 feet). Improvements would focus on improving horizontal clearances. It is assumed that increasing the vertical clearance of the tunnel (currently 10 feet) to accommodate large vehicles is cost prohibitive due to limited grade differential between the roadway and railroad, as well as drainage impacts
- Investigate opportunities for a bicycle and pedestrian bridge over the railroad, such as at the County's 4-H property, improving east/west linkages between the residential neighborhoods, North Branch Park, and adjacent retail and commercial destinations
- Investigate opportunities to create bicycle and pedestrian connections between the Home Depot shopping center and adjacent residential neighborhoods to the north, possibly in the vicinity of this bridge connection over the rail line

- Investigate opportunities for a bicycle and pedestrian bridge over the Raritan River at North Branch Park, improving access to residential neighborhoods to the west, providing access to the North Branch rail station, and providing a non-vehicular linkage between the two towns
- Install sidewalk and/or multi-use facility along Milltown Road
- Implement elements of the Regional Center Greenway, linking the PGIA to the County's broader greenway network and enhancing regional bicycle and pedestrian connectivity
- Investigate available ROW and opportunities to stripe bicycle lanes along Doolittle Drive and Vanderveer Road, enhancing bicycle access to the residential neighborhoods
- Investigate opportunities for green infrastructure improvements

Investigate Transit Access

The PGIA's proximity to NJ TRANSIT's Raritan Valley Line provides an opportunity to integrate transit service and access into the PGIA. In coordination with NJ TRANSIT, investigate the potential of developing a new station and transit village site in the PGIA.

As a complementary part of the study, the County and NJ TRANSIT may also investigate relocating the North Branch station approximately 0.7 miles west to the vicinity of Readington Road. This would have the benefit of significantly improving access to that station from U.S. Route 22 and from the south via Readington Road, as well as locating the station closer to RVCC and potential opportunities for a transit village and additional commuter parking capacity.

Advancement of a potential train station in the PGIA should be part of a larger vision that includes vehicular access as well as the proposed bicycle and pedestrian improvements to enhance overall access between a train station and the surrounding between residential, commercial, and retail development.

Narrow one-lane underpass of the NJ TRANSIT Raritan Valley Line along Milltown Road, near its intersection with Doolittle Drive


Route 202 / NJ TRANSIT Rail Spur PGIA
Transportation Improvements
N
22
614
679
Traci Rd
Janine Way
Marcia Way
Walters
Milltown Road
Shields Ln
Buena Pkwy
Vista Rd
28
Villa Dr
Patterson St
Jarman Pl
Ventura Dr
Vanderveer Rd
Renzi Rd
River Rd
Doolittle Dr
Windor Dr
Pinhorn Dr
Vones Ln
202
Milltown Rd
Regional Greenway Segment (off road)
Regional Greenway Segment (on road)
Potential Improvements
Bicycle Lane
Sidewalk / Multi-use Path
Tunnel Enhancement
Path Connection
New Train Station
Investigate tunnel expansion to improve geometrics and horizontal clearance
Path connections create shorter, more convenient routes for biking and walking
Investigate new rail station and transit village opportunity
Implement Regional Greenway segments to improve regional recreational trail connectivity
Investigate bicycle pedestrian bridge and sidewalk connection opportunity

Improvement	Order of Magnitude Cost (Est.)	Time Frame	Potential Partners
Route 202 NJ TRANSIT Rail Spur			
Adopt a Complete Streets Policy	Low	Short	Township
Investigate opportunities to create bicycle and pedestrian connections between the Home Depot shopping center and adjacent residential neighborhoods to the north	Med	Med	Township
Investigate sidewalk and/or multi-use facility along Milltown Road	Low	Med	Township
Implement elements of the Regional Center Greenway, linking the PGIA to the County's broader greenway network	Low	Med	Township
Investigate bicycle lanes along Doolittle Drive and Vanderveer Road	Low	Med	Township
Investigate opportunities for green infrastructure improvements	Low	Med	Township
Investigate enhancements for the Milltown Road tunnel under the Raritan Valley Line to allow two-way traffic and safe bicycle and pedestrian access	High	Long	Township / NJ TRANSIT
Investigate opportunities for a bicycle and pedestrian bridge over the railroad	High	Long	Township / NJ TRANSIT
Investigate opportunities for a bicycle and pedestrian bridge over the Raritan River at North Branch Park	Med	Long	Township / County
Investigate potential for train station and transit village in the PGIA, and relocating the North Branch station farther west to the vicinity of Readington Road	High	Long	Township / County / NJ TRANSIT

NOTE:

Order of Magnitude Cost tiers:

- Low: <$5M
- Medium: $5M - $25M
- High: >$25M

Time Frame tiers:

- Short: <3 year
- Med: 3-8 years
- Long: >8 years

REGIONAL CENTER
RARITAN BOROUGH

Description

Location / Raritan Borough, Bridgewater Township, Somerville Borough NJ

Principal Roadways / U.S. 202, U.S. 206, NJ 28

Acreage / 1297(Raritan Borough)

Existing Uses / Residential, Commercial, Industrial

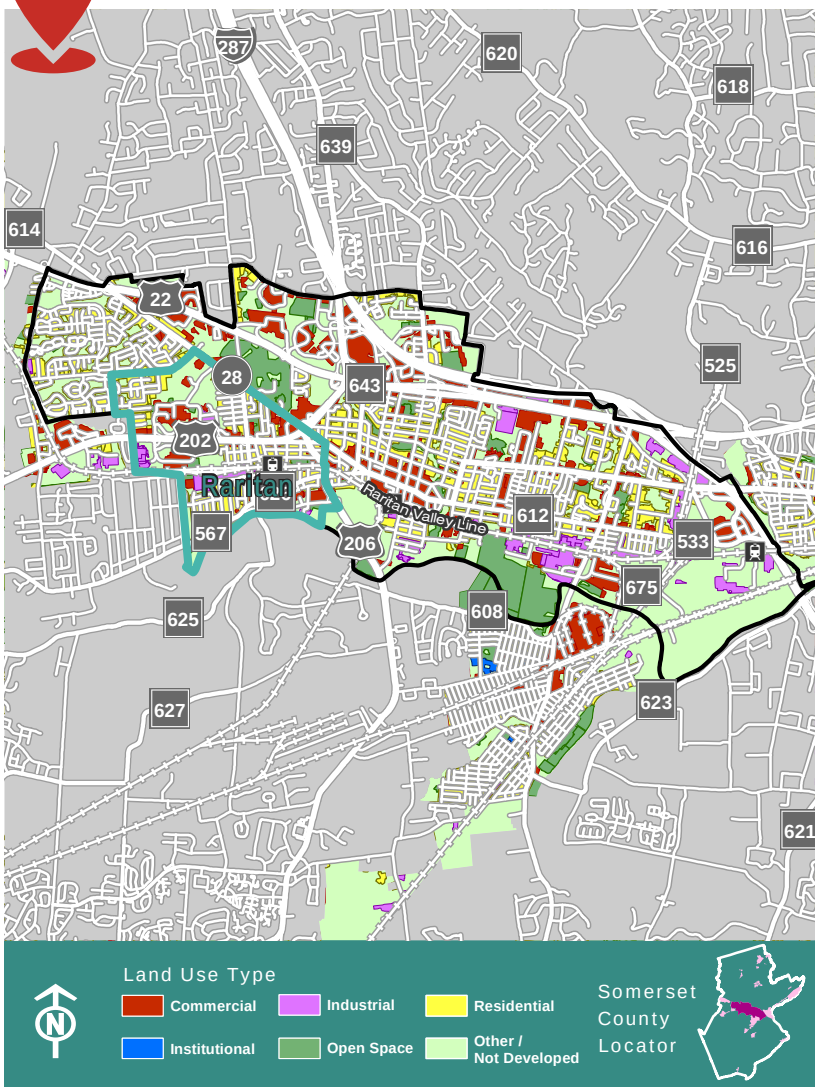
Current Zoning / Central Business (B-1), Shopping Center (B-2), Medium-High Density Residential (R-4)

Complete Streets Policy / Raritan - Yes, Somerville - Yes, Bridgewater - No

PGIA Summary

Raritan Borough is a historic community with a traditional downtown and relatively dense street network. A central location with its own NJ TRANSIT train station and access to regional highways provide excellent mobility options. However, area highways and the Raritan Valley Line railroad tracks also create significant barriers between the northern and southern portions of the community, as well as to neighboring Somerville. Transportation access, the Raritan River Greenway, and proximity to Duke Farms and other regional destinations provide opportunities to revitalize the downtown and under-utilized areas within the Borough.

PGIA Map



Multi-Modal Access Metrics

Transit Access

MODERATE TRANSIT SERVICE

Network Walking Reach

SLIGHTLY WALKABLE

**PGIA-wide analysis*

Access Summary

Multimodal access metrics indicate a multimodal environment in the PGIA. There are both NJ TRANSIT and Somerset County bus service within the PGIA, including NJ TRANSIT's Raritan Valley Line's Raritan Station. The PGIA is slightly walkable due to a low density of roadway network and some street connectivity limitations. However, downtown Raritan is denser and more walkable than other areas of the PGIA. A detailed analysis of the transportation infrastructure can be found in the Existing Conditions Technical Memorandum.

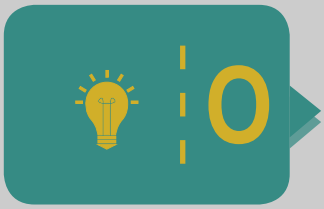
Investment Area Overview

Strengths

- Direct access to regional highways (U.S. Route 202, U.S. Route 206 and NJ 28)
- N.J. TRANSIT's Raritan Valley Line's Raritan train station and Somerset County bus service
- Off-road trail facility connecting shopping centers
- Raritan Borough has a Complete Streets policy

Weaknesses

- Peak period congestion on U.S. Routes 202 and 206
- U.S. Routes 202, and 206 are challenging for bicycling due to the high speeds, heavy volumes, lack of bicycle facilities, and wide intersection crossings



Opportunities

- The local street network provides opportunities for preferred bicycle routes parallel to the high stress arterials
- Implementation of the Raritan River Greenway can enhance opportunities for recreation, tourism, and transportation; improve regional connectivity; and transform the riverfront
- Proximity and access to Duke Farms and downtown Somerville

Constraints

- Few crossings over Raritan River limit bicycle and pedestrian connectivity
- U.S. Routes 202 and 206 create barriers within the local bicycling network

Land Use and Planning Scenarios

Raritan Borough, though part of the broader Regional Center PGIA, has its own distinctive small town character. While other planning efforts are already addressing opportunities along the riverfront, near the train station, and in the vicinity of the Washington School, additional opportunities were examined for focus areas along the Somerset Street and Orlando Drive corridors and at the Raritan Mall shopping center.

Focus Area 1: Raritan Mall Shopping Center

The Raritan Mall shopping center fronts U.S. Route 206 and is currently developed as a single-story, supermarket-anchored retail center comprising approximately 110,000 square feet, plus a 10,000 square foot pad site. There are vacancies throughout the mall and concerns that a supermarket anchor use may not have long-term viability based on strong competition elsewhere in the market. Other existing uses in the strip center are generally quick service food and restaurants, with some retail and personal service.

Raritan Mall focus area

The site is located within the B-2 Shopping Center Business District, which is designated for large-lot, highway-oriented commercial areas serving both local residents and the regional market. Permitted retail uses include supermarkets, personal service establishments, and indoor recreation facilities. While the site is located near the Borough's downtown and is adjacent to residential areas, its highway scale and size, orientation towards U.S. Route 206, and parking lot frontage separate it from the surrounding community. Only the rear employee entrances and loading areas face to the neighboring Busky Lane. Sidewalks connecting to and from the neighboring property and an adjacent children's park lead only to blank walls and service roads.

In each of the following scenarios, site planning, pedestrian, and connectivity improvements can reconnect the site to the eastern end of the Somerset Street corridor and the adjacent Regional Center to the east. Integration with the Raritan River Greenway would enhance local and regional linkages and support opportunities for value-added uses, including both recreation and river- and trail-front dining. Improvements to north/south linkages, including Nevius Street and Busky Lane, would better connect the site and the Orlando Drive corridor to the Borough center. This combination of Greenway and local street connections would create potentially extensive off-road systems between the Regional Center towns, Raritan Valley Line rail service, and across the Raritan River to Hillsborough and Duke Farms.

Scenario 1

Existing Zoning

The site measures 12.2 acres, of which approximately 1 acre is cut off from the main site due to the forward loop jug-handle ramp from U.S. Route 206 to Orlando Drive and remains undeveloped. Including this 1 acre portion, the maximum developable yield under the existing B-2 zoning requirements would be approximately 145,000 square feet of retail space with 640 parking spaces (1 space per 250 sf of retail), which is approximately 30 percent larger than the existing center. Increasing the size of the center, particularly with large-footprint, highway-oriented stores as envisioned by the zoning, may not be ideal due to traffic and loading concerns, as the rear of the site backs up to residential areas.

Scenario 1: Existing Zoning

- 145,055 sf retail
- Total parking area required: 185,670 sf
- Total parking spaces required: 580
- 145,055 sf building footprint
- Maximum impervious coverage: 70%
- Site FAR: 0.30

Scenario 2

Mixed-Use Commercial: Retail, Services, and Professional Office

As indicated above, the existing building, sidewalk, and circulation configurations are poorly connected with adjacent neighborhoods, streets, sidewalks, and amenities. Redevelopment provides an opportunity to better connect the site to Raritan's existing street grid, including improved access to, and compatibility with, its neighbors to the north and west at a scale more consistent with types of businesses anticipated in a smaller-scale, more pedestrian-friendly neighborhood business district. Revised and upgraded frontages and facades could be better oriented to enhance these connections and provide accessible linkages that promote connectivity rather than prevent it. In addition, the local street Granetz Plaza could be connected through the parking lot behind the existing Retro Fitness/Dollar Tree building and connected directly to the east/west side street along the northern edge of the existing Raritan Mall buildings.

With some tweaks to the zoning and off-street parking standards, combined with a creative layout, the site could include ±95,000 square feet of retail, restaurants, personal service, and office uses. Evening uses could provide an opportunity to balance and reduce parking counts, with approximately 400 spaces required (and the potential for less based on a proposed combination of uses). With a different layout, the busiest retail portion of the site could be oriented towards U.S. Route 206 with buildings pushed out to the street frontages while providing a transitional buffer between the site and adjacent residential uses. While the River Park apartments to the west create an impediment to a continuous connection to Somerset Street, Busky Lane via Glaser and Wyckoff Avenues provide direct access.

These site design and zoning changes could be paired with a new vision for Orlando Drive, which would both reconnect the Borough to the Raritan River through implementation of the Raritan River Greenway, park expansion, and riverfront redevelopment, as well as and connect Raritan Borough with the anticipated redevelopment and new street grid for the Somerville landfill site east of U.S. Route 206. Extending Orlando Drive as a through street into Somerville would provide an east/west alternative to Somerset Street. In this scenario, the site could be an anchor to the overall Orlando Drive corridor vision.

Scenario 2: Mixed-Use Commercial

- 38,681 sf retail / restaurant
- 33,846 sf personal service
- 24,176 sf office
- Total parking area required: 126,101 sf
- Total parking spaces required: 394
- 96,703 sf building footprint
- Maximum impervious coverage: 60%,
- Site FAR: 0.20

Scenario 3

Mixed-Use Commercial and Limited Residential

The site's location at the confluence of highway commercial and single-family residential properties present an opportunity for mixed-use development, which could provide a transition between U.S. Route 206 and the adjacent residential neighborhoods. Such a development would eliminate the large-footprint store in favor of smaller retail and service commercial uses, such as salons, restaurants, or professional/medical offices. A limited multi-family residential component on the western portion of the site would provide a more appropriate transition between residential and commercial land uses. A 3-floor residential development could include 50 one- and two-bedroom stacked flats (with opportunities for workforce and affordable housing units), a mixture of garage and surface parking, and approximately 75,000 square feet of retail/commercial in the eastern portion of the site, oriented towards U.S. Route 206. The stacked flat concept allows for a cohesive development that functions as a multi-family development, but has a closer resemblance to townhomes than a bulky building, making it appropriate for this transitional location.

As part of this concept, the Borough could consider implementing a mixed-use overlay zone to test the market for mixed-use development at this site. An overlay would retain the underlying B-2 zoning, but provide an option for residential in the rear of the site with highway-fronting commercial uses along U.S. Route 206.

Scenario 3: Mixed-Use Commercial /Residential

- 72,738 sf residential
- Total residential units: 55
- 58,022 sf retail / restaurant
- 50,769 sf personal service
- 36,264 sf office
- Total parking area required: 192,161 sf
- Total parking spaces required: 618
- 22,310 sf building footprint (residential)
- 145,055 sf building footprint (retail)
- Maximum impervious coverage: 65%, Site FAR: 0.32

Focus Area 2: Somerset Street Corridor

The second focus area spans Somerset Street from Gaston Avenue to Frederick Street. The approximately 0.5-mile corridor is characterized primarily by commercial uses in the western portion that transition into single-family residential and mixed-use buildings in the eastern area. Many of the commercial buildings have upper floor apartments, or are used as both professional/medical office and residential space. Lot along the corridor are typically small and many lack off-street parking. Parking along Somerset Street is regulated but not metered. The lack of existing or developable off-street parking is a long-standing constraint to new development or redevelopment along the corridor.

Scenario 1

Existing Zoning

The western-most portion of the corridor surrounding Gaston Avenue is located in the R-4 Zone and is generally residential. The majority of the district is located in the B-1 Central Business District, which permits a wide variety of retail, personal service, office, and institutional uses, with residential units permitted above the ground floor at a density not greater than 15 units per acre. The minimum lot size in the district is 7,500 square feet, with 10,000 square feet required for mixed-use (commercial/residential) properties. However, many of the properties in this zone are undersized for any potential re-use or development, particularly those that are mixed-use. Additionally, any more than two apartments above a commercial space would exceed the permitted density if the properties are considered to be individual sites. The lack of existing parking or candidate redevelopment sites have minimized the appetite for new development along the corridor.

Scenario 2

Zoning Revisions / Gateway Treatments

In order to retain the scale of the corridor, minor zoning changes are recommended for the northern and western portions of East Somerset Street. Targeted application of zoning changes will increase flexibility in these areas and encourage both redevelopment and lot consolidation in the denser, more central portions of the corridor, while preserving the character of the eastern, more residentially-oriented portion.

In the B-1 Central Business District, the small lot sizes and 15 unit-per-acre maximum deter upper floor residential. These zoning standards may be appropriate to encourage lot consolidation and ground-up redevelopment; however, they could be an impediment for rehabilitation or site improvements of existing buildings, where more than 2 units would not be permitted by-right. While the use controls in the district seem to be appropriate based on existing conditions and scale of the area, less-restrictive bulk variances for properties under a certain lot area may encourage rehabilitation of under-utilized or unfit buildings if larger redevelopment sites are not available.

Somerset Street corridor focus area

Somerset Street is an important east/west route for visitors traveling between Somerville and Duke Farms or other outlying recreation areas. The Borough's 2003 Master Plan identified a Somerset Street Streetscape Initiative as a proposed goal/objective for the Borough to consider. At the time, the Master Plan identified new sidewalks, pedestrian-scaled lights, and street trees as initial starting points. Extending this throughout the corridor would provide a visual connection to the greater Regional Center at the Borough boundary, while highlighting the historic nature of East Somerset Street and downtown Somerville. Wayfinding signage could highlight the character of the Borough and Regional Center, from its Revolutionary War importance through its industrial heritage. A further streetscape initiative should be re-codified and further defined in future plans for this area, potentially with an added focus on property maintenance and code enforcement for non-compliant property owners.

Scenario 3

Area in Need of Rehabilitation Designation

Per the State's Local Housing and Redevelopment Law (NJSA 40A:20-1 et seq.), a municipal governing body has the power to determine that an area is "in need of rehabilitation" if certain conditions are met related to property condition and utilization (e.g., more than half of housing stock is over 50 years old, pattern of under-utilization, or majority of infrastructure over 50 years old). This non-condemnation tool would allow the Borough to adopt a rehabilitation and/or redevelopment plan to guide future development of the corridor, as well as provide for short-term tax abatements to encourage property owners to complete upgrades without facing higher tax bills. The Borough could consider pursuing such a designation to determine if the Somerset Street corridor meets the conditions for "area in need of rehabilitation." The designation would allow the Borough to plan a voluntary repair and rehab program, and/or for enhanced code enforcement of existing buildings without the utilization of eminent domain.

Multimodal Transportation Scenarios

Raritan Borough and the focus areas at Raritan Mall shopping center and East Somerset Street benefit from proximity to several transportation assets, including Raritan Valley Line commuter rail service, regional highways, and the Raritan River Greenway network (in various stages of development). Transportation improvements seek to enhance connectivity to these systems, as well as enhance multimodal linkages between the focal areas and surrounding neighborhoods, Duke Farms, and Somerville. Improvement strategies are outlined below and illustrated on the map on the following page.

Raritan River Greenway Access

The Raritan River Greenway is a significant asset for the Borough for both recreation and multimodal mobility, improving transportation options within Raritan and providing connections to Somerville, Duke Farms, and Duke Island Park. The southeastern portion of the Greenway is currently under construction, from Raritan Valley Park to U.S. Route 206. The following improvements are recommended:

- Complete Greenway segment between Raritan Valley Park and the Nevius Street Bridge, including both short term and long term strategies:
  - Short Term
    - Stripe bicycle lanes along Orlando Drive between Nevius Street and U.S. Route 206
    - Install sidewalk along Busky Lane between Orlando Drive and Raritan Valley Park
    - Install pedestrian crossing at the intersection of Orlando Drive at Busky Lane
    - Install sidewalk along Orlando Drive between Loomis Street and Wall Street
    - Improve linear park along Orlando Drive and enhance pedestrian connectivity through the public park between Canal Street and Orlando Drive
    - Improve pedestrian crossing at intersection of Canal Street at Nevius Street
    - Investigate addition of gateway treatment at the west end of Orlando Drive
  - Long Term
    - Investigate widening or "bulbing-in" Orlando Drive to include on-street parking adjacent to, and a component of, Raritan Mall redevelopment, providing traffic calming and a gateway from U.S. Route 206
    - Complete greenway along the Raritan River between Raritan Valley Park and Nevius Street through property acquisition and/or developer requirements to construct the trail facility
- Install multiuse path along River Road (CR 625) between the Nevius Street Bridge and Duke Farms


Regional Center PGIA | Raritan Borough
Transportation Improvements
N
Richard St
Lynwood St
Ashton St
Danbury Ave
202
644
Cornell Blvd
22
28
Bell Ave
Farrand St
Quick Ave
567
Tillman St
Sherman Ave
La Grange St
3rd St
2nd Ave
Anderson St
Thompson St
Lincoln St
Codington St
Reimer St
Elmer St
Somerset St
Granetz Plz
Johnson Dr
Second St
Gaston Ave
1st St
Glaser Ave
Veterans Memorial Dr W
Meehan Ave
Weiss Ter
Wall St
Loomis St
Doughty St
Canal St
Mill St
Busky Ln
Orlando Dr
206
626
Nevius St
625
S Bridge St
Duke Farms
Enhance pedestrian access and local roadway connectivity during redevelopment
Investigate park enhancement with improved pedestrian access from Canal St and Orlando Dr with green infrastructure elements
Investigate new roadway connection with Somerville
Provide northern bike/ped entrance to Duke Farms and connection to Raritan Greenway
Raritan River Greenway (completed)
Raritan River Greenway (in construction)
Raritan River Greenway (planned)
Focus Area
Potential Improvements
New Roadway
Multi-use Path
Sidewalk
Pedestrian Crossing
Bicycle Lane
Bicycle Boulevard
Shared-Lane Markings

Local Bicycle and Pedestrian Improvements

Bicycle and pedestrian improvements within the Borough seek to improve linkages between the focal areas, the train station, and the Raritan River Greenway. Potential improvements include:

- Provide bicycle facility along Thompson Street: This north/south street provides a connection between the train station, the Somerset Street (CR 626) commercial district, and the Nevius Street Bridge and the Greenway via Canal Street or Mill Street. Potential improvements include:
  - Between the rail station and Somerset Street (~42' existing cartway, parking both sides):
    - Alternative 1: Remove on-street parking on one side and install bicycle lanes in both directions. The provision of full bicycle lanes will improve bicyclist comfort for most bicyclists
    - Alternative 2: install a bicycle lane in the northbound direction (uphill) and shared lane markings in the southbound direction
  - Between Somerset Street and Canal Street (~34' existing cartway, parking both sides)
    - Install shared lane markings. The existing cartway width is too narrow to accommodate bicycle lanes without eliminating on-street parking.
  - Mill Street (~31' existing cartway, no parking)
    - Install bicycle lanes in both directions, providing a connection to the proposed Orlando Drive bicycle lanes
- Install bicycle boulevard along La Grange Street and Elmer Street, providing a low stress connection between the focal areas and the train station, and an alternative route to Somerset Street
- Investigate shared-lane markings along Somerset Street. Although it has higher traffic volumes (10,500 ADT) and is less comfortable for the average adult bicyclist, shared-lane markings will assert the legitimacy of bicyclists using the roadway through the downtown
- Investigate shared-lane markings on Tillman Street, Fifth Street, and segments of Sherman Street and Thompson Street. This corridor is an on-street segment of the proposed Regional Greenway Plan, providing a connection to downtown Raritan via the proposed bicycle lanes on Thompson Street, and a connection west to Greenway segments in Bridgewater and Branchburg
- Formalize pedestrian access to the train station from 2nd Avenue. An existing unimproved path is currently used by vehicles and pedestrians. Install a sidewalk connection parallel to the railroad, with a fence separating it from train activity
- Update downtown streetscape to replace rounded brick pavers. Utilize traditional concrete, or textured pavement or pavers with square edges and tight joints to create a more ADA-friendly surface
- Accompanying redevelopment, extend downtown streetscape treatment farther east along East Somerset Street, including wider sidewalks, pedestrian scale lighting, and street trees

- Enhance pedestrian connectivity between focal areas and the surrounding neighborhoods
- Implement Borough-wide wayfinding system to highlight routes and key destinations, particularly, the train station, downtown, Raritan River Greenway, Duke Farms, Duke Island Park, and Somerville
- Verify signal timing for pedestrian crossings meet MUTCD standards

Street Network Connectivity Opportunities

Raritan Borough is a built-out community with very limited opportunities for new street connections. However, significant redevelopment in the focal areas should consider the following improvements:

- Large parcel consolidation and redevelopment should seek to tie into and extend the existing street grid, such as enhancing access to the Raritan Mall focal area from Busky Lane
- In collaboration with Somerville Borough, NJDOT, and NJ TRANSIT, investigate extending Orlando Drive east, with an underpass of the Raritan Valley Line to connect with Veterans Memorial Drive at the Davenport Street intersection. This is consistent with the alternatives developed for access improvements as a part of the *Somerville Station Area and Landfill Vision Plan*

The historic Nevius Street Bridge, part of the Raritan River Greenway, provides a bicycle and pedestrian crossing that links Raritan Borough to Duke Farms and Hillsborough

Improvement	Order of Magnitude Cost (Est.)	Time Frame	Potential Partners
Regional Center PGIA | Raritan Borough			
Raritan River Greenway Access			
Stripe bicycle lanes along Orlando Dr between Nevius St and U.S. Route 206	Low	Short	Borough
Install sidewalk along Busky Ln between Orlando Dr and Raritan Valley Park	Low	Short	Borough
Install pedestrian crossing at the intersection of Orlando Dr at Busky Ln	Low	Med	Borough
Install sidewalk along Orlando Dr between Loomis St and Wall St	Low	Med	Borough
Improve pedestrian crossing at intersection of Canal St at Nevius St	Low	Med	Borough
Investigate addition of gateway treatment at the west end of Orlando Dr	Low	Med	Borough
Install multiuse path along River Rd (CR 625) between the Nevius St Bridge and Duke Farms	Low	Med	Borough / County / Duke Farms
Improve linear park along Orlando Dr and enhance pedestrian connectivity through the park between Canal St and Orlando Dr	Low	Med	Borough
Investigate widening or “bulbing-in” Orlando Drive to include on-street parking adjacent to the Raritan Mall focus area	Med	Long	Borough / Developer
Complete Greenway along the Raritan River between Raritan Valley Park and Nevius St	High	Long	Borough / County

Improvement	Order of Magnitude Cost (Est.)	Time Frame	Potential Partners
Local Bicycle and Pedestrian Improvements			
Investigate alternatives and implement bicycle lanes on Thomson St between Somerset St and train station	Low	Short	Borough
Investigate shared-lane markings on Thomson St between Somerset St and Canal St	Low	Short	Borough
Investigate bicycle boulevard along La Grange St and Elmer St	Low	Short	Borough
Investigate shared-lane markings along Somerset St (CR 626)	Low	Short	Borough / County
Investigate shared lane markings on Tillman St, Fifth St, and segments of Sherman St and Thompson St	Low	Short	Borough
Install a sidewalk connection parallel to the railroad from 2nd Ave to train station with a fence separating it train from activity	Med	Med	Borough / NJ TRANSIT
Implement Borough-wide wayfinding system	Low	Long	Borough
In collaboration with Somerville Borough, NJDOT, and NJ TRANSIT, investigate extending Orlando Dr east, with an underpass of the Raritan Valley Line to connect with Veterans Memorial Dr at the Davenport St intersection	High	Long	Borough / NJDOT / NJ TRANSIT / Developers

NOTE:

Order of Magnitude Cost tiers:

- Low: <$5M
- Medium: $5M - $25M
- High: >$25M

Time Frame tiers:

- Short: <3 year
- Med: 3-8 years
- Long: >8 years

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REGIONAL CENTER
SOMERVILLE BOROUGH

Description

Location / Somerville Borough, Raritan Borough, Bridgewater Township NJ

Principal Roadways / U.S. 206, CR 643, CR 612

Acreage / 1,500 (Somerville Borough)

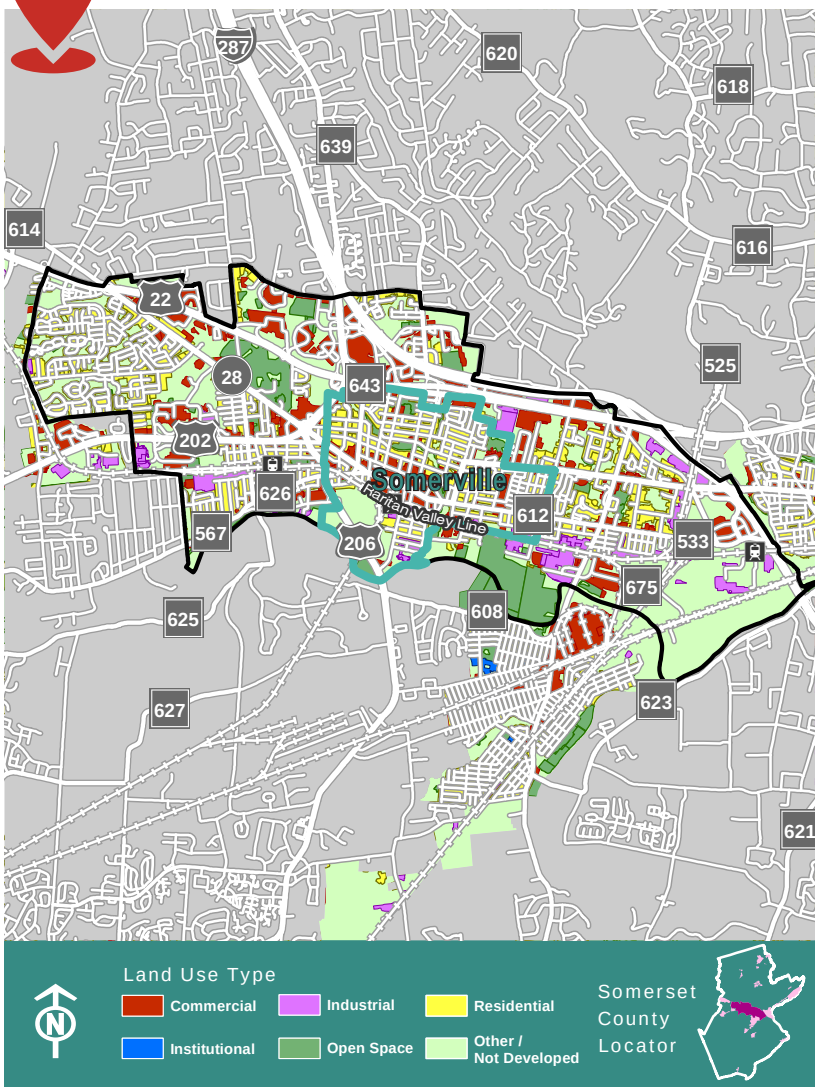
Existing Uses / Residential, Commercial, Industrial

Complete Streets Policy / Somerville - Yes, Raritan - Yes, Bridgewater - No

PGIA Summary

The Borough of Somerville is a part of the Regional Center PGIA. Somerville is the heart of the Regional Center, serving as the County seat and home to County offices and courthouse, and its mix of retail, restaurants, and jobs makes it a regional destination. The downtown has seen significant redevelopment in recent years, and the influx of new residents is reinvigorating the local economy and creating an active community beyond the traditional 9-5 working hours. Innovative projects, such as the implementation of a pedestrian mall on Division Street, have also supported this effort. The relatively dense, mixed-use downtown area and surrounding neighborhoods support a walkable environment, complemented by the Peter's Brook Greenway to enhance bicycle and pedestrian connections.

PGIA Map



Multi-Modal Access Metrics

Transit Access

MODERATE TRANSIT SERVICE

**PGIA-wide analysis*

Network Walking Reach

SLIGHTLY WALKABLE

Access Summary

Multimodal access metrics indicate a multimodal environment in Somerville Borough. There are both NJ TRANSIT and Somerset County bus service within the PGIA, including NJ TRANSIT's Raritan Valley Line and Somerville Station. The overall PGIA is only slightly walkable due to a low density of roadway network, and street connectivity limitations created by arterial roadways, highways, and waterways. Downtown Somerville Borough is denser and more walkable than other areas in the overall Regional Center PGIA. A detailed analysis of the transportation infrastructure can be found in the Existing Conditions Technical Memorandum.

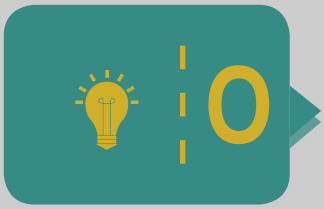
Investment Area Overview

Strengths

- Direct access to regional highways (U.S. Route 202 and 206, 22, and 28, and Interstate 287)
- NJ TRANSIT Raritan Valley Line's Somerville train station and NJ TRANSIT and Somerset County bus service
- Walkable downtown and mixed use environment
- Somerville Borough has a Complete Streets policy

Weaknesses

- High crash rates on U.S. Routes 202 and 206
- U.S. Routes 202 and 206 are challenging for bicycling due to the high speeds, heavy volumes, lack of bicycle facilities, and wide intersection crossings
- High speed regional arterials bordering and passing through the Borough contribute to quality of life impacts and speeding and safety issues on local streets



Opportunities

- The local street network provides opportunities for preferred bicycle routes parallel to the high stress arterials
- Proximity and easy access to Duke Farms and downtown Somerville
- Recent and on-going redevelopment activity has contributed to revitalization of the downtown as a regional destination
- Borough submitted Problem Statements to NJDOT for various projects along NJ 28

Constraints

- The Raritan River and Raritan Valley Line create barriers to north/south mobility
- U.S. Routes 202 and 206 create barriers within the local bicycling network
- Somerville has a high percentage of non taxable properties

Multimodal Transportation Scenarios

Proposed improvements for Somerville Borough seek to bolster the recent mixed-use redevelopment and resurgence in the downtown and further enhance multimodal mobility and safety, with the goal of creating a pedestrian friendly, traffic-calmed downtown core. The concepts build upon the East Central Business District recommendations from the Supporting Priority Investment in Somerset County Through Access and Mobility Improvements Study (June 2013). Strategies include gateway treatments to slow traffic entering the Borough; reconfiguring Veteran's Memorial Driveway; and targeted wayfinding, parking, intersection, and pedestrian crossing improvements to support a more comprehensive and comfortable multimodal environment. Improvement strategies are outlined below and illustrated on the map on the following page.

Gateway Treatments

Gateway treatments provide visual cues and physical deflection to drivers of a change in both the character and use of the roadway. They can be used to help transition travelers from a higher-speed, highway environment to lower speed, local, multimodal streets, thus shifting driver expectations to be aware of the potential for increased street activity and potential conflicts with other roadway users (e.g., pedestrians, parking vehicles, bicyclists, etc.). With the high-speed arterials to the north (U.S. Route 22) and west (U.S. Route 206) of the Borough, there are opportunities to utilize gateway treatments to help slow motorists as they enter the Borough.

Investigate opportunities for gateway treatments at:

- South Bridge Street, near Southside Avenue
- Somerset Street, near U.S. Route 206 or Middaugh Street
- Mercer Street, near Mastogen Drive
- Mountain Avenue, near Brookside Avenue
- Davenport Street, near Somerville High School/Ivanhoe Street
- North Bridge Street, near Wilmer Avenue
- Grove Street, near East Orchard Street
- Gaston Avenue, near North Cadillac Drive
- East Main St, near Gaston Ave

Gateway design can include a variety of traffic calming, placemaking, signage, and streetscape improvements appropriate to local needs, context, and traffic volumes. Design can draw upon a tool box of countermeasures and strategies that may include:

- Lane narrowing and lane diet treatments

- Radar speed detection and display signs
- Bulb outs to narrow the roadway cross section
- Enhanced pedestrian crossings
- Cobblestone median treatment
- Other vertical or horizontal deflection traffic calming countermeasures

Veterans Memorial Drive

Veterans Memorial Drive provides an alternate route to Main Street through downtown Somerville, with direct access to Somerville station, as well as parks, new residential development, office buildings, and new mixed-use development at the Shop Rite plaza. While a road diet was recently implemented on Veterans Memorial Drive West to improve safety and enhance the streetscape, the eastern portion remains largely a four-lane cross section, which is inconsistent with the downtown environment, surrounding development, redevelopment activity, and multimodal needs. A recent Safe Routes to School grant supports the road diet concept.

- Investigate continuation of the road diet cross section along Veterans Memorial Drive East, extending the existing two-lane cross section implemented on Veterans Memorial Drive West and consistent with the Borough's recent SRTS grant application. Elements include:
  - Two travel lanes
  - Center turn lane
  - Bicycle lanes or shared-lane treatments
  - Repair deteriorated sidewalk sections and install new sidewalk between South Bridge Street and Warren Street
  - Install ADA-curb ramp upgrades
  - Replace traffic signal at Hamilton Street with new equipment, including pedestrian signal heads with countdown timers
  - Restripe high-visibility continental crosswalks
- Investigate lowering the speed limit from 30 mph to 25 mph

Multimodal Improvements

There are a number opportunities to improve multimodal safety and circulation around downtown Somerville.

Potential strategies include:

- Borough-wide wayfinding, including both directional and parking information
- Investigate prohibition of U-turns along Main Street between Gaston Avenue and West End Avenue to enhance safety for all roadway users
- Conduct a traffic signal warrant analysis for the intersection of Main Street at Veterans Memorial Drive East to evaluate if a traffic signal is required to improve circulation for motor vehicles and improve crossings for pedestrians
- Investigate converting Warren Street to one-way southbound, reducing the number of turning movement conflicts at the intersection with Main Street and improvement safety for motorists and pedestrians

Regional Center PGIA | Somerville Borough

Transportation Improvements

Head-out angle parking has been implemented in communities throughout New Jersey, such as Hoboken (shown at left), Millburn, and Sea Bright. Key benefits of head-out parking include:

- *Significantly improves visibility for drivers leaving a parking space, allowing them to better see on-coming traffic*
- *Open vehicle doors block access to the street and orient vehicle passengers towards the sidewalk, which is particularly beneficial for young children*
- *Trunk is oriented nearest the curb, making it more convenient and safer to load/unload cargo*

- Reconfigure on-street parking on Main Street between Bridge and Grove Streets to head-out angle design in order to improve roadway safety. The safety benefits associated with head-out parking are particularly beneficial along a high-volume, multimodal, commercial corridor such as Route 28
- Investigate opportunities to implement a bike depot at the train station to enhance and encourage bicycle connections with transit. Collaborate with potential partners, such as NJ TRANSIT and the New Jersey Bike and Walk Coalition
- Investigate the use of curb extensions at intersections and pedestrian crossings throughout the downtown to shorten the pedestrian crossing distance, improve pedestrian visibility, prevent parking too close to intersections, expand the pedestrian realm to allow more space for street furniture and other amenities, and create opportunities to implement green stormwater elements. This strategy is applicable throughout the Main Street corridor, but potential priority locations include:
  - » At Division Street, particularly along the westbound side, helping knit the pedestrian mall and community space of Division Street into the Main Street streetscape and improving visibility of the pedestrian crossing to Division Street
  - » At the Bridge Street and Warren Street intersections, significantly reducing the pedestrian crossing distance, which is longer than other sections of Main Street due to the angled parking
  - » At Vanderveer Park, improving visibility of the midblock crossing of Park Avenue and slowing vehicular traffic adjacent to the park
- Investigate reducing the curb radii at the intersection of Main Street and Grove Street to reduce the pedestrian crossing distance and encourage slower vehicle turning speeds

Daylighting treatments can include the use of quickly implementable, inexpensive materials in order to shorten crossings, improve visibility, and slow traffic, such as the example to the right from Hoboken, NJ. They can be used as an interim treatment until a permanent curb extension is installed, or maintained longer term in order to permit more flexible use of the street.

- Expand daylighting treatments throughout the downtown where more permanent curb extensions are not as practical due to cost constraints, drainage impacts, or events that utilize the full street width. These more flexible daylighting techniques can be moved to accommodate special events or can be quick, interim improvements until permanent curb extensions can be implemented. Daylighting techniques typically utilize pavement striping, paint, or a textured epoxy surfacing to visually narrow the roadway, and a moveable, vertical element such as flexible bollards or planters.
- Investigate improvements at the intersection of High Street, Mechanic Street, and Park Avenue. The complex intersection alignment and limited sight lines create difficult circulation and safety issues for both motorists and pedestrians.:
  - » Modify circulation to make Mechanic Street one-way southbound, thereby eliminating several of the turning movements at this intersections. Accompany the change with curb extensions to tighten the intersection to slow turning vehicles and shorten pedestrian crossings, particularly at the Mechanic Street and Park Avenue crossings.
  - » Investigate implementing a modern mini-roundabout to minimize vehicle turning movement conflicts and reduce traffic speed along High Street
- Conduct a traffic study for the west end of the downtown to evaluate opportunities to improve circulation and multimodal mobility entering the downtown from the west, particularly for the triangle area and intersections created by Mountain Avenue, West End Avenue, Somerset Street, and Doughty Avenue. Potential strategies, such as a roundabout at the intersection of Somerset Street at Veterans Memorial Drive West and Mountain Avenue, may improve circulation, but require a broader analysis of the surrounding area
- In collaboration with Raritan Borough, NJDOT, and NJ TRANSIT, investigate extending Orlando Drive east, with an underpass of the Raritan Valley Line to connect with Veterans Memorial Drive at the Davenport Street intersection. This is consistent with the access improvements developed as a part of the *Somerville Station Area and Landfill Vision Plan*

Improvement	Order of Magnitude Cost (Est.)	Time Frame	Potential Partners
Regional Center PGIA | Somerville Borough			
Gateway Treatments			
South Bridge Street, near Southside Avenue	Low	Med	Borough
Somerset Street, near U.S. Route 206 or Middaugh Street	Low	Med	Borough/County
Mountain Avenue, near Brookside Avenue	Low	Med	Borough
Mercer Street, near Mastogen Drive	Low	Med	Borough
Davenport Street, near Somerville High School/Ivanhoe Street	Low	Med	Borough
North Bridge Street, near Wilmer Avenue	Low	Med	Borough
Grove Street, near East Orchard Street	Low	Med	Borough
Gaston Avenue, near North Cadillac Drive	Low	Med	Borough
East Main St, near Gaston Ave	Low	Med	Borough
Veterans Memorial Drive			
Investigate lowering the speed limit from 30 mph to 25 mph	Low	Short	Borough
Extend road diet cross section along Veterans Memorial Drive East	Med	Med	Borough
Multimodal Improvements			
Borough-wide wayfinding, including both directional and parking information	Med	Med	Borough
Reconfigure the on-street parking on Main St between Bridge St and Grove St to head-out angle parking	Low	Med	Borough / NJDOT
Investigate prohibition of U-turns along Main St between Gaston Ave and West End Ave	Low	Short	Borough / NJDOT

Improvement	Order of Magnitude Cost (Est.)	Time Frame	Potential Partners
Investigate options to implement a bike depot at the Somerville train station	Low	Short	Borough / NJ TRANSIT / NJ Bike & Walk Coalition
Conduct a traffic signal warrant analysis for the intersection of Main Street at Veterans Memorial Drive East	Med	Med	Borough / NJDOT
Investigate reducing the curb radius on Grove St at East Main St	Low	Med	Borough / NJDOT
Investigate the use of curb extensions at Division St/Main St intersection	Low	Med	Borough / NJDOT
Investigate the use of curb extensions at intersections of Main St at Bridge St and Warren St	Low	Med	Borough / NJDOT
Investigate the use of curb extensions at the midblock crossing to Vanderveer Park along Park Avenue	Low	Med	Borough
Investigate converting Warren Street to one-way southbound	Low	Short	Borough / NJDOT
Expand daylighting treatments throughout the downtown	Low	Med	Borough / NJDOT
Investigate improvements at the intersection of High St, Mechanic St, and Park Ave, such as modifying Mechanic St to be one-way southbound or a modern mini-roundabout	Low	Med	Borough
Conduct traffic study to evaluate circulation and multimodal mobility entering the downtown from the west	Low	Med	Borough / County / NJDOT
Investigate extending Orlando Dr east, with an underpass of the Raritan Valley Line to connect with Veterans Memorial Dr at the Davenport St intersection	High	Long	Borough / NJDOT / NJ TRANSIT / Raritan Borough / Developers

NOTE:

Order of Magnitude Cost tiers:

- Low: <$5M
- Medium: $5M - $25M
- High: >$25M

Time Frame tiers:

- Short: <3 year
- Med: 3-8 years
- Long: >8 years

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PGIA Evaluation and Recommendations

BOUND BROOK BOROUGH

BOUND BROOKS

Description

Location / Bound Brook Borough

Principal Roadways / U.S. Route 22, NJ Route 28, CR-528, CR-635

Acreage / 1,568 (Bound Brook: 1,085)

Existing Uses / Residential, Commercial Corridors, Industrial Pockets

Current Zoning / Neighborhood Business/ Residential (NB/R), Redevelopment Plan (RDV)

Complete Streets Policy / Yes

PGIA Summary

The PGIA is comprised of the entirety of the Boroughs of Bound Brook and South Bound Brook. Within Bound Brook itself, assets include traditional mixed-use downtowns, the train station, and a waterfront location. The Borough of Bound Brook is seeking to enhance the gateways to the downtown area to encourage development, and create a framework to identify appropriate capital improvements and infrastructure connections to support future development and bridge barrier presented by the railroad.

PGIA Map

Multi-Modal Access Metrics

Transit Access

GOOD TRANSIT SERVICE

Network Walking Reach

SLIGHTLY WALKABLE

*PGIA-wide analysis

Access Summary

Review of mobility options and access metrics in downtown Bound Brook indicate a multimodal environment. There is NJ TRANSIT and Somerset County (CAT, DASH and SCOOT) bus service in the Borough. NJ TRANSIT's Bound Brook Train station is in the PGIA and is located within the Borough. While Bound Brook's downtown is walkable, the broader PGIA is only slightly walkable due to barriers created by the railroad and river and pockets of reduced street connectivity on the outskirts of the municipalities. A detailed analysis of the transportation infrastructure can be found in the Existing Conditions Technical Memorandum.

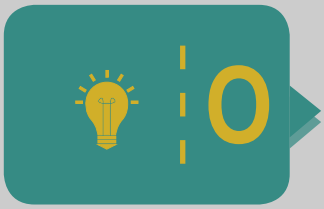
Investment Area Overview

Strengths

- Well served by multiple major corridors, including I-287, U.S. Route 22, and NJ-28
- Access to NJ TRANSIT trains and buses as well as Somerset County shuttles
- Dense, traditional downtown along Main Street
- Short, walkable blocks
- Bound Brook has a Complete Streets policy

Weaknesses

- Speeding as motorists enter into Bound Brook from Bridgewater
- Lack of crosswalks at cross-street intersections along Talmadge Avenue
- Lack of pedestrian-scale lighting
- Parcel assembly constrained by many small properties



Opportunities

- Presence of the East Coast Greenway along the D&R Canal is an opportunity to bring bicyclists/tourists into the community to support local businesses
- Integrate property between the Raritan River and D&R Canal towpath into a more publicly accessible park
- Demarcate gateways along principal access routes

Constraints

- Wide expanse of the Raritan River constrains the addition of a bicycle/pedestrian span proximate to the Bound Brook train station
- Only one roadway (CR 527) crosses the Raritan River within the PGIA and serves as the major connection between Bound Brook and South Bound Brook
- Railroad is a barrier to accessing the riverfront

Land Use and Zoning Scenarios

Recent planning efforts in Bound Brook have sought to leverage the Borough's traditional mixed-use downtown, train station, and waterfront location. As a result, downtown redevelopment in the vicinity of the train station has progressed. The recent completion of the Army Corps of Engineers' flood control project has significantly reduced the need for floodproofing, supporting increasingly favorable conditions for development. To further encourage development, the Borough is seeking to enhance the gateways to the downtown, create a framework to identify appropriate infrastructure and capital improvements, and enhance access to the riverfront.

Site Details

The focus area for this PGIA is the approximately 0.5-mile Talmadge Avenue corridor, which extends eastward from Tea Street (the Borough's western boundary with Bridgewater) to Columbus Place (the western edge of the traditional downtown area). The corridor is characterized by small lots (approximately 7,000 square feet on average) and a mix of land uses, with commercial uses clustered towards the eastern and western ends and residential throughout. Residential uses are generally two- to four-family homes, including some with first-floor commercial. The eastern portion is within a ten-minute walk of the train station.

The corridor is designated as Redevelopment Area 2 in the Borough's Amended Redevelopment Plan. The Redevelopment Plan imparts certain bulk, use, and design standards and exceptions from the underlying zoning of the area. The area of focus for this analysis is within the underlying NB/R zone, which permits neighborhood-scale retail and service uses with upper-floor residential, at a maximum height of 35 feet.

Talmadge Avenue presents opportunities for an enhanced streetscape, improved multimodal mobility, infill development (including affordable and/or workforce housing), green infrastructure, and improved aesthetics, all of which could support and enhance targeted development and redevelopment. Some existing uses and buildings are inconsistent with the overall character and future potential of the corridor. Two sub-areas are evaluated on the following pages.

Focus Area 1: Talmadge / Van Keuren Site

An assemblage of parcels on the north side of Talmadge Avenue adjacent to the Van Keuren Avenue intersection was identified as a potential gateway site, which would support a four-story residential development currently proposed for the Talmadge Commons site on the south side of the corridor. This area was also identified in the *Phase I Study* as commercial parcels with a low improvement to land value (ILV) ratio. The proposed assemblage consists of six lots (Block 5, Lots 1 and 37-41) totaling one acre. All lots except Lot 1 are located within Subdistrict 2.4 of Redevelopment Plan Area 2.

Focus Area 1: Talmadge / Van Keuren Site

Scenario 1

Existing Zoning

One- to three-family homes, townhouses, stacked flats, and live-work units are permitted in Subdistrict 2.4, with a maximum of 20 units per acre and 1.5 parking spaces per unit. Per these standards, 20 two-bedroom stacked flats could be built on the site with 25 first-floor garage spaces and five surface parking spaces. In order to create a visual transition between Talmadge Avenue and the residential streets to the rear, the building may be oriented towards Talmadge Avenue with substantial screening in the rear to shield the parking area. This scenario also allows for three stories along the Talmadge Avenue frontage and two stories towards the Van Keuren frontage. The total FAR of 0.70 and impervious coverage of less than 60 percent are within the Redevelopment Plan standards (1.0 and 65 percent, respectively.)

Scenario 1: Existing Zoning

- 30,450 sf residential, 20 residential units
- Parking req'd: 30 spaces / 9,800 sf (6,600 sf garage and 3,200 sf surface)
- 14,820 sf building footprint
- Maximum impervious coverage: 65%
- Site FAR: 0.70

Scenario 2

Mixed-Use Residential / Retail

A second scenario proposes the same residential density of 20 stacked flats, as well as a small amount (4,000 – 5,000 square feet) of ground floor retail along Talmadge Avenue and three-story building heights. Thirty residential garage spaces and approximately 10 retail surface spaces would be provided. The FAR of 0.80 and lot coverage of approximately 60 percent would still be within the ordinance standards and allow room for appropriate landscaping and buffering.

Scenario 2: Mixed-Use Residential / Retail

- 30,450 sf residential, 20 residential units
- 4,500 sf retail
- Parking req'd: 41 spaces / 10,200 sf
- 15,350 sf building footprint
- Maximum impervious coverage: 65%
- Site FAR: 0.80

Scenario 3

Residential with Density Bonus

A final scenario proposes a three-story residential-only apartment building with 40 smaller one- and two-bedroom units. Per the ordinance standards, one parking space is provided per unit in an enclosed street-level parking area, though apartments would be at street level along the frontages. Coverage would remain at approximately 65 percent and FAR approximately 0.95. The additional permitted density could be scaled up to 40 units from the permitted 20 units by incorporating workforce and/or affordable housing units and utilizing green building design techniques that would tie into the overall green vision for the corridor.

Scenario 3: Residential with Density Bonus

- 44,520 sf residential, 40 D.U.s
- Parking req'd: 50 spaces / 13,000 sf
- 18,589 sf building footprint
- Maximum impervious coverage: 75%
- Site FAR: 1.02

Focus Area 2: South Side of Talmadge Avenue, within Subdistrict 2.6

This subdistrict encompasses the western-most portion of the study area from Tea Street to La Monte Avenue, and functions as a western gateway into the Borough at the intersection of Tea Street and Talmadge Avenue. This location was previously one of the most flood-prone areas of the Borough and has benefitted from new landscaping, drainage, and open space facilities as part of the Army Corps project. The properties on the south side of Talmadge Avenue are heavily constrained by the railroad corridor. As a result, lots in this area are generally irregularly shaped and measure barely 50 feet deep at certain points. While these lots are larger than many in the corridor, the constraints have led to stagnated development, including vacant and underutilized commercial structures, limited streetscape appeal, and existing uses that appear to extend into the railroad right-of-way. Similar to Focus Area 1, several of the commercial parcels in Focus Area 2 were also identified in the *Phase I Study* as having a low improvement to land value (ILV) ratio.

Focus Area 2: South Side of Talmadge Avenue, within Subdistrict 2.6

Scenario 1

Existing Zoning

Development provisions for Subdistrict 2.6 permit certain commercial development and open space while specifically prohibiting several of the area's existing uses, including auto-related uses and warehouses. Due to a lack of redevelopment activity, these nonconforming uses remain in place. The minimum lot size is 15,000 square feet, minimum lot frontage is 150 feet, and 10- to 15-foot setbacks are required from the front, side, and rear property lines. There is also a maximum lot coverage requirement of 50 percent. The shallow lots represent a severe development constraint, particularly in conjunction with the existing bulk regulations, which would leave a minimal building envelope that would not be appropriate for modern commercial development.

Scenario 2

Green Infrastructure Corridor

Given this lack of new development potential, at least a portion of this area could be utilized as a dedicated green infrastructure corridor that would also serve as an attractive gateway to the Borough and serve as a reminder of the Borough's accomplishments related to flood control. It would further create a visual buffer between Talmadge Avenue and the railroad tracks. A variety of street trees, attractive bioswales, and a community-oriented rain garden would complement the Army Corps infrastructure and nearby Tea Street active open space, as well as reduce impervious coverage in an environmentally sensitive portion of the Borough. It may also be possible to associate the purchase, construction, and maintenance of a community open space site with development fees from future redevelopment along the corridor, either in lieu of providing open space on-site (which may be challenging given the overall small lot sizes along the corridor) or as part of a framework for funding capital improvements through development fees.

Scenario 3

Retail / Office Mixed use + Open Space

Scenario 3: Mixed Use - Office / Retail

- 5,000 sf retail
- 5,000 sf residential
- Parking req'd: 25 spaces / 8,000 sf
- 5,000 sf building footprint
- Maximum impervious coverage: 65%
- Site FAR: 0.40

While the lack of lot depth and the irregular shaped lots would remain a challenge, there is potential for a small retail/office mixed-use development near the intersection of Talmadge and La Monte Avenues (in the vicinity of Block 3, Lots 2 through 6). This development would have a relatively small footprint (approx. 5,000 square feet) and be located close to the front yard property line, which would be a deviation from the Redevelopment Plan. Second floor office space over retail use is permitted in Subdistrict 2.6. An off-street parking area consisting of 20 to 25 spaces would be located to the west of the building and would be screened from view from Talmadge Avenue. The building would present the opportunity for a corner feature on either side that could serve as a minor gateway into the Borough. The remainder of the focus area (approximately one-half acre that is currently Block 3, Lots 1 and 1.01) would follow a green infrastructure and/or community open space scenario as detailed above.

Multimodal Transportation Improvements

Mobility improvements focus on strategies to support green infrastructure and redevelopment investments. Several completed or planned initiatives, such as the Main Street streetscape improvements and planning for the Hamilton Street Pedestrian Plaza, are helping to revitalize the downtown and create a more attractive pedestrian realm for residents and visitors. Improvements for Talmadge Avenue, as outlined below and illustrated on the map on the following age, seek to integrate and tie into the downtown corridor improvements, enhance pedestrian mobility and safety, improve the streetscape, and create gateways that welcome people into the Borough and calm traffic.

Borough-wide Initiatives

- Introduce green infrastructure as a standard design, including curb extensions for stormwater collection and groundwater infiltration and recharge, as well as traffic calming and streetscape enhancements
- Use opportunities for sidewalk widening to mitigate utility pole impacts on Borough sidewalks

Talmadge Avenue Improvements

Through a comprehensive program of design, streetscape, and placemaking elements, the following strategies seek to enhance the Talmadge Avenue corridor in order to enhance safety, calm traffic, and improve multimodal mobility. The overall design of Talmadge Avenue, especially along the south side, should be compatible for a desired "Quiet Zone" to mitigate rail traffic noise impacts.

- Install crosswalks (striped or textured pavement) at all intersecting streets to better facilitate pedestrian accessibility along the corridor
- Repair sidewalk network where the surface has deteriorated or heaving occurs
- Investigate striping 11-foot travel lanes to visually narrow the roadway and encourage lower traffic speeds
- Upgrade the intersection at Tea Street to include a gateway treatment.
- Investigate converting the existing striped median to a raised pedestrian refuge island at the westbound approach to the intersection with Tea Street. This treatment would enhance pedestrian mobility and serve as a gateway feature, calming traffic entering the Borough
- Investigate reducing the speed limit to 25 mph and install shared-lane markings along Talmadge Avenue


Bound Brooks PGIA | Bound Brook
Transportation Improvements
N
Vosseller Ave
W Maple Ave
Winsor St
Central Ave
525
Longwood Ave
28
527
Thompson Ave
Grove Ave
635
Ston St
St
East St
St John Pl
Evergreen Ave
Install shared-lane markings along Talmage Avenue
Investigate opportunities for a bike depot at the train station
Investigate reducing speed limit from 30mph to 25mph
E High St
VanKeuren Ave
Fairview Ave
E 2nd St
W 2nd St
Linden Ave
Church St
Hamilton St
Tea St
Lamonte Ave
Romney Rd
North St
Fisher Ave
Talmage Ave
Drake St
Wheatland Ave
533
W Main St
Improve streetscape by adding pedestrian scale lighting, seating, and wayfinding
Install pedestrian midblock crossing with flashing beacon
Investigate installation of a pedestrian refuge island and gateway treatment
D&R Canal Towpath
W Prospect St
Elm St
Enhance pedestrian connectivity between the Boroughs with bridge path, lighting, and wayfinding improvements
623
Jerome Ave
Louis Ave
Kilcourse St
Shields Ave
Madison St
Cedar Ave
287
621
610
Sanders Ave
Howard Ave
Equator Ave
Garfield Ave
Bathgate Ave
Beck Ave
Samuel Pl
Campus Dr
Focus Area
Transit Village Boundary
Potential Improvements
Shared Lane Markings
Streetscape Improvements
Speed Limit Reduction
Improved Pedestrian Crossing

- Install pedestrian-scale lighting, extending the existing pedestrian scale lighting near the Tea Street intersection and farther east on the Main Street segment of CR 533. Lighting could be installed either on existing utility poles or as freestanding fixtures. If the latter option is pursued, attachments for planters would add opportunities to incorporate seasonal vegetation
- Integrate public access, seating, and other streetscape amenities into any future green infrastructure improvements along Talmadge Avenue between Tea Street and La Monte Avenue
- Introduce new street trees along Talmadge Avenue to enhance the streetscape
- Identify opportunities to incorporate green spaces and green infrastructure on the westbound side of Talmadge Avenue, east of Tea Street
- Investigate wayfinding and directional signing elements at key approaches and decision points from the west to divert regional and heavy truck traffic to more appropriate routes
- Investigate additional street design elements to discourage through travel by heavy trucks

Main Street Pedestrian Improvements

Several strategies seek to improve pedestrian access and linkages between Bound Brook and South Bound Brook.

- Investigate installation of a speed table on Main Street at the intersection of Van Horne Plaza and Hamilton Street, improving pedestrian connectivity to the train station and calming traffic
- Investigate addition of a mid-block crossing of Main Street (CR 527) at Railroad Avenue, including continental striping and a rectangular rapid flashing beacon (RRFB) to improve visibility. The crossing would:
  - » Provide a more direct connection between the self-storage property and the Meridian Apartments, whose residents utilize the site for parking. Pedestrians traveling between the two locations are currently required to make three crossings around the Main Street/ Bolmer Boulevard roundabout
  - » Link the self-storage site (future Borough kayak/canoe storage area) to the historic stone bridge site and future kayak/canoe put-in area under the Queen's Bridge
- Collaborate with South Bound Brook Borough, Somerset County, NJDOT, the D&R Canal Commission, and other stakeholders to advance pedestrian improvements on the historic Queens Bridge and surrounding paths, better linking the downtowns of Bound Brook and South Bound Brook. Improvements include:
  - » New pedestrian path on the Canal Bridge
  - » New pedestrian lighting along the D&R Canal Towpath
  - » New historic signage and wayfinding
  - » Restoration of the historic Canal Bridge swing mechanism
  - » Pedestrian-activated rectangular rapid flashing (RRFB) beacon where the D&R Canal Towpath traverses Queens Bridge

Train Station Access

Bound Brook is one of the highest ridership stations on the Raritan Valley line. The proximity of the NJ TRANSIT rail service within the PGIA provides an opportunity to enhance multimodal access and mobility. Access to the existing station is limited to the East Main Street side of the station.

Transit Oriented Development Opportunities in Somerset County (2005) included an extensive assessment of Bound Brook Station and opportunities for station area development and enhancement. Findings and recommendations included three key objectives:

- Strengthen the downtown as a mixed-use transit village
- Reinforce the role of the station in the downtown through improved access, parking, and multimodal accommodations
- Take advantage of the waterfront, which currently has limited accessibility

Implementation recommendations include the following:

- Integrate future station options with planned NJ TRANSIT parking lot upgrades
- Rehabilitate the historic train station to serve rail commuters and serve as an anchor for transit oriented development in the downtown
- Address multimodal and ADA accessibility to the train station from both Bound Brook and neighboring South Bound Brook
- Investigate opportunities to implement a bike depot at the Bound Brook train station to enhance and encourage bicycle connections with transit, potentially as part of planned repaving of the station parking area. Work with potential partners, such as NJ TRANSIT and the New Jersey Bike and Walk Coalition
- Investigate potential for West Main Street access to the train station area, including a kiss-and-ride

Streetscape around Bound Brook Train Station


Bicycle Parking at Bound Brook Train Station

Improvement	Order of Magnitude Cost (Est.)	Time Frame	Potential Partners
The Bound Brooks PGIA | Bound Brook Borough			
Talmadge Avenue Corridor			
Install crosswalks at all intersecting streets	Low	Med	Borough / County
Repair sidewalk network where the surface has deteriorated	Low	Med	Borough / County
Investigate striping 11' travel lanes	Low	Med	Borough / County
Investigate upgrading the intersection at Tea Street to include a gateway treatment, such as a raised pedestrian refuge island at the westbound approach	Low	Med	Borough / County
Investigate reducing the speed limit to 25 mph and the install shared-lane markings along Talmadge Avenue	Low	Med	Borough / County
Install pedestrian lighting	Low	Med	Borough / County
Integrate public access, seating, and other streetscape amenities into any future green infrastructure improvements	Low	Med	Borough / County
Investigate wayfinding and directional signing elements at key approaches and decision points from the west to divert regional and heavy truck traffic to more appropriate routes	Low	Med	Borough / County
Investigate additional street design elements to discourage through travel by heavy trucks on Talmadge Ave	Low	Med	Borough / County
Introduce new street trees to enhance the streetscape	Low	Long	Borough / County
Identify opportunities to incorporate green spaces and green infrastructure on the westbound side of Talmadge Avenue, east of Tea Street	Med	Long	Borough / County

Improvement	Order of Magnitude Cost (Est.)	Time Frame	Potential Partners
Main Street / Queens Bridge Improvements			
Investigate addition of a mid-block crossing of Main Street (CR 527) at the south side of Railroad Avenue, including continental striping and a rectangular rapid flashing beacon (RRFB)	Low	Med	Borough / County
Advance package of pedestrian improvements on the historic Queens Bridge and surrounding paths	High	Long	Borough / Bound Brook / Borough / County / NJDOT / D&R Canal Commission
Investigate installation of a speed table at the intersection of Main Street with Hamilton Street / Van Horne Plaza	Low	Long	Borough / County / NJ Transit
Train Station Access Improvements			
Address multimodal and ADA accessibility to train station from both Bound Brook and neighboring South Bound Brook	Low	Short	Borough / NJ TRANSIT
Investigate opportunities to implement a bike depot at the Bound Brook train station	Low	Short	Borough / NJ TRANSIT / NJ Bike and Walk Coalition
Integrate future station options with planned NJ Transit parking lot upgrades	High	Long	NJ TRANSIT / Borough
Rehabilitate the historic train station to serve rail commuters and serve as an anchor for transit oriented development in the downtown	High	Long	Borough / NJ TRANSIT / Developer
Investigate potential for West Main Street access to train station area including kiss-and-ride	Med	Long	Borough / NJ TRANSIT

NOTE:

Order of Magnitude Cost tiers:

- Low: <$5M
- Medium: $5M - $25M
- High: >$25M

Time Frame tiers:

- Short: <3 year
- Med: 3-8 years
- Long: >8 years

BOUND BROOKS
SOUTH BOUND BROOK

Description

Location / South Bound Brook Borough, NJ

Principal Roadways / CR-527, CR-621, CR-610

Acreage / 1,568 (South Bound Brook: 483)

Existing Uses / Residential, Commercial Corridors, Industrial Pockets

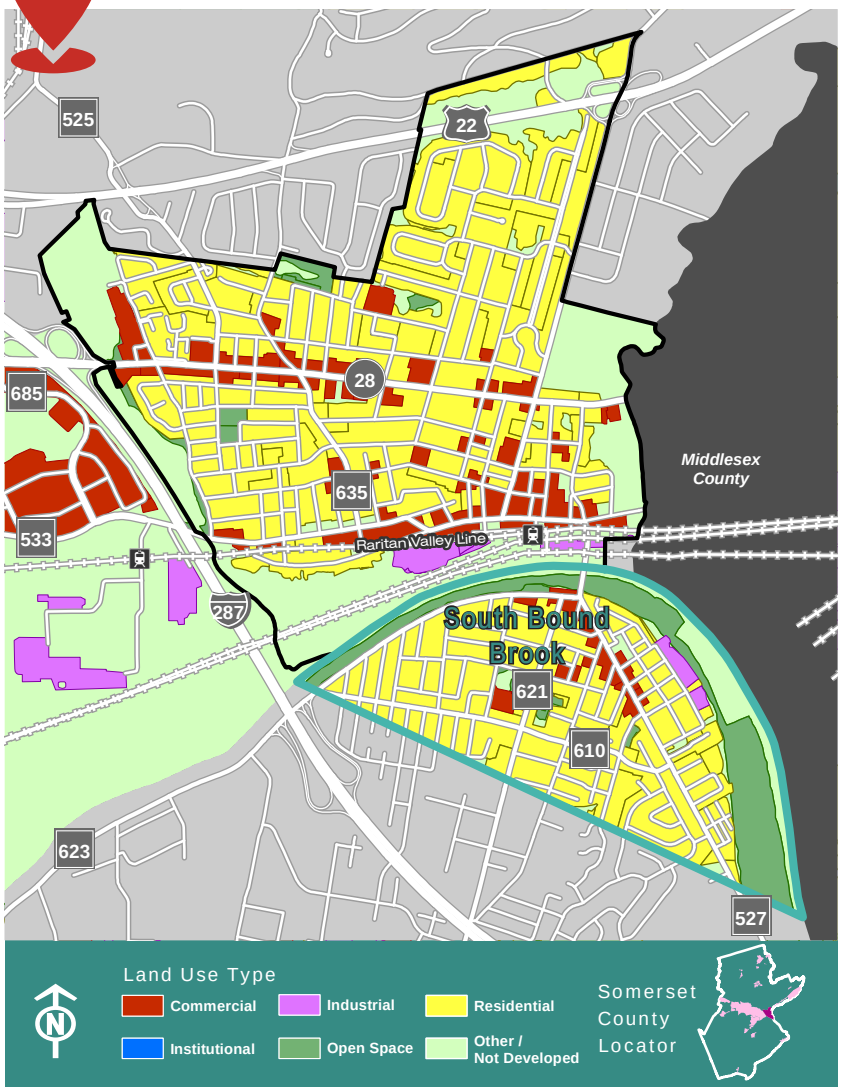
Current Zoning / Business District (B), Light Industrial (LI), Residential (R-2)

Complete Streets Policy / No

PGIA Summary

The PGIA is comprised of the entirety of the Boroughs of Bound Brook and South Bound Brook. Located to the south of the Raritan River and D&R Canal, South Bound Brook encompasses a small mixed-use environment and compact street grid with access to natural, scenic, and historic assets and amenities, and proximity to the historic Bound Brook train station. The Borough is seeking to complement recent redevelopment activity with supportive infrastructure and capital improvements, enhanced access to the train station, and additional development within the designated transit village zone.

PGIA Map



Multi-Modal Access Metrics

Transit Access

GOOD TRANSIT SERVICE

Network Walking Reach

SLIGHTLY WALKABLE

PGIA-wide analysis

Access Summary

Review of mobility options and access metrics in downtown South Bound Brook indicate a multimodal environment. There is Somerset County (CAT and DASH) bus service in the Borough. NJ TRANSIT's Bound Brook Train station is across the Raritan River, within 0.25 miles of South Bound Brook. While South Bound Brook's downtown is walkable, the broader PGIA is only slightly walkable due to barriers created by the railroad and river and pockets of reduced street connectivity on the outskirts of the municipalities. A detailed analysis of the transportation infrastructure can be found in the Existing Conditions Technical Memorandum.

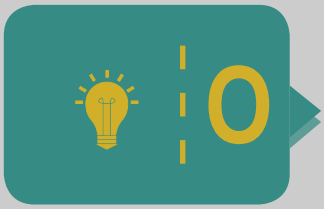
Investment Area Overview

Strengths

- Well served by proximity to multiple major corridors, including I-287 and NJ-28
- Access to NJ TRANSIT's Raritan Valley Train line and buses as well as Somerset County shuttles
- Dense main street located in the downtown of South Bound Brook with recent streetscape improvements
- Short, walkable blocks

Weaknesses

- Parcel assembly limited by many small properties
- South Bound Brook lacks a Complete Streets policy
- Raritan River and D&R Canal create significant barriers to north/south mobility, limited to a single bridge crossing within the borough



Opportunities

- Presence of the East Coast Greenway along the D&R Canal is an opportunity to bring bicyclists/tourists into the community to support local businesses
- Opportunity to integrate properties between the Raritan River and D&R Canal towpath into a more publicly-accessible parklands
- Opportunity to introduce gateways along principal access routes to calm traffic and enhance walkability
- Recommend South Bound Brook to adopt a Complete Streets policy

Constraints

- Only one roadway (CR 527) crosses the Raritan River within the PGIA and serves as the only direct connection between Bound Brook and South Bound Brook
- Constrained sidewalks along the bridge limit connectivity for Bound Brook and South Bound Brook residents

Land Use and Planning Scenarios

South Bound Brook is seeking to capitalize on a series of recent residential and commercial redevelopment projects. The Borough has identified several additional candidate sites for redevelopment. These options include Bound Brook NJ TRANSIT station transit village area/ perimeter. Proposed redevelopment will also ideally tie into potential tourist and recreation activity along the D&R Canal.

Focus Area 1: GAF Research Building

This building, vacant for decades, has potential historic value. Due to its location directly on the canal, re-use of the property is the most viable development alternative for environmental and permitting purposes. The property is conveniently sited as a landmark for culture and heritage visitors, as it is less than a 10-minute walk from the Bound Brook train station, which could potentially encourage day-trippers as part of a canal tourism program. Located in an industrial zoning district, the Borough may consider pursuing an area in need of redevelopment designation for the property. As an alternative, a Canal District overlay zone could be implemented to identify areas of special sensitivity and permit strictly tourism-oriented uses in appropriate locations on the canal banks.

There are potential environmental and/or structural constraints associated with the property and physical building. Without conducting a full interior site inspection, it is unclear at this time what condition the building is in and what type of rehabilitation would be necessary to meet current building codes. Therefore, the full buildable square footage is not calculable under the scope of this analysis. It is anticipated that GAF will be transferring the building to the Borough after remediation; bond money has been acquired and set aside for the contract purchase.

GAF focus area: Aerial view (above), street-level (left)

Scenario 1

Existing Zoning

The GAF Research Building (Block 1, Lot 2) is located in the Light Industrial (LI) district and is the sole property located in this zone. The LI district generally permits industrial uses that do not involve the storage, use, or manufacturing of dangerous substances and that do not create a hazard to the public. Permitted uses include offices, warehousing, fabrication, and non-nuisance generated industrial uses, all of which must not be hazardous. While the site technically meets the zone's minimum lot area of 25,000 square feet, it would not be possible to redevelop the property per the zone standards if the existing building was demolished, due to the size and shape of the property in conjunction with the zone's bulk requirements (i.e., required front yard setback of 25 feet).

Scenario 2

Visitors' Center / Mixed-Use Concept

The long, narrow size of the property would likely make larger scale redevelopment difficult without encroaching onto canal buffers The ideal redevelopment would tie the building into the County's and the Delaware & Raritan Canal Commission's (DRCC) frameworks for tourism centering on the canal, while contributing to the Borough's surging economic vitality. One option would be to adaptively reuse the existing reinforced concrete building as a visitors' center focusing on the Bound Brooks' industrial heritage and environmental importance, which could also offer a café/restaurant and kayaking rentals to support tourism and add to the mix of uses in the transit village vicinity. Such adaptive reuse may also present an opportunity to showcase green infrastructure and alternative energy sources, such as a green roof or solar power to tie into the environmentally sensitive nature of the surrounding canal.

Scenario 3

Mixed-Use Project

If a visitors' center scenario was determined not to be feasible due to environmental or other constraints, the property could potentially be redeveloped as a low-impact mixed use project, with a small ground-floor retail or restaurant and upper-floor office or flex space. Green infrastructure could also be a component of this type of development, and preserving the existing building would retain the site's historic character in a way that would benefit the existing contact of the overall waterfront and downtown areas. The appropriate scale of development would be determined by the quality and size of the existing building coupled with the availability of parking in the existing paved area to the west of the building. The results of ongoing remediation on the site would also inform the mix of uses, though residential would remain unlikely.

Focus Area 2: Municipal Building and Garage

The Borough's small municipal building (located at 12 South Main Street) and adjoining garage represent prime redevelopment sites within the designated transit village area. The properties (Block 56, Lots 3, 4, and 8) measure a total of 0.62 acres and are located between Elm and Main Streets. The sites are located within the 10-minute walking radius of the Bound Brook train station have easy access to the Borough's retail districts, and could create a meaningful gateway into the Borough. While the small size of the property and the surrounding land use character make truly dense development infeasible (and undesirable), there are mid-density models that could provide a mixed-use environment while remaining harmonious with the Borough's intentions. If the municipal building is relocated, there is also the possibility of vacating Elm Street to provide additional space for development and better pedestrian connections, as it will no longer be needed for police or emergency access.

Scenario 1

Existing Zoning

Both sites are located in the Business (B) zone, which permits retail sales and services, offices, and public garages. To support the walkable nature of this portion of South Main Street, no setbacks are required in the front or side yards and no off-street parking is required. Though the property is adjacent to residential uses, no additional buffer is required by ordinance, as these residences are existing nonconforming uses located in the B Zone. The maximum buildout of the site is 25,000 square feet in area, with a 10-foot rear yard setback from Elm Street. The building could ostensibly measure two stories, with ground floor retail and upper-floor office, per the 28-foot/two-story maximum height requirement. However, in practice, a building this size would be out of scale with the surrounding properties and may create a traffic and parking issue in the immediate vicinity.

Scenario 1: Existing Zoning

- 22,956 sf retail
- 22,956 sf office
- 22,956 sf building footprint
- Maximum impervious coverage: 100%
- Site FAR: 1.70

Scenario 2

Mixed Use Project

While there are some limitations due to the small size of the municipal building's site and commuting limitations of the Bound Brook station, there is the potential for a two-story mixed-use development including 15 to 20 residential units with approximately 8,000 square feet of retail along Main Street. Parking would be within rear grade-level garage entrances and a small off-street parking area. With a proposed parking ratio of 1.5 spaces per unit, all parking could be contained on-site. As residential uses are not currently permitted in the B district, a mixed-use proposal would offer the opportunity for workforce and/or affordable housing in a convenient location near amenities and transit.

Scenario 2: Mixed Use - Retail / Residential

- 8,440 sf retail
- 17,220 sf residential, 16 residential units
- Total parking area required: 11,821 sf
- Total parking spaces required: 32
- 13,720 sf building footprint
- Maximum impervious coverage: 76%
- Site FAR: 0.95

Scenario 3

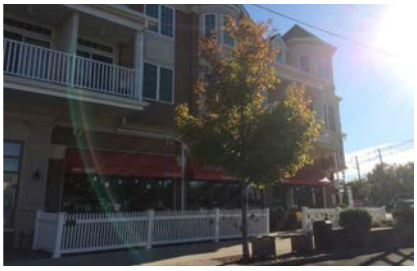
Mixed Use Project with Density Bonuses

If the level of activity in the area could support a more intense use, there is the possibility for a three-story, modified TOD-style scenario. Such a development could include 25 to 30 residential units across two upper floors with approximately 10,000 square feet of first floor retail space. A proposed parking ratio of 1.25 spaces per residential unit would recognize the TOD potential and the split between one- and two-bedroom units geared towards young professionals. Parking would be located in a combination of grade-level rear garages (facing away from Main Street and heavily screened from Elm Street) and leased from the municipal parking lot across Elm Street. No dedicated retail parking would be provided due to the potential for shared parking and because retail off-street parking is not presently required in the existing B zone. The additional density would be offset by required green infrastructure improvements on the site and in the vicinity, including green roofs and/or walls and an off-site pocket park. More units would also allow more potential workforce and/or affordable housing units.

Scenario 3: Mixed Use Project with Density Bonuses

- 11,194 sf retail
- 32,288 sf residential, 30 residential units
- Total parking area required: 9,141 sf
- Total parking spaces required: 49
- 16,144 sf building footprint
- Maximum impervious coverage: 76%
- Site FAR: 1.61





Station-area redevelopments in Garwood and Cranford in Union County provide examples of the potential scale that could be utilized on this site in Scenarios 2 and 3. These generally consist of two residential floors over one floor of retail, which provides generally smaller service uses such as salons, cafes, small restaurants, and fitness/wellness uses to supplement the existing community retailers.

Focus Area 3: Black Belt Auto Site

This long vacant site, approximately 0.40 acres, is located in the middle of a residential neighborhood at the intersection of Edgewood Terrace and Elizabeth Street. While not as centrally located as the existing municipal building, the site is a potential relocation option if the Borough were to consider redevelopment of that site. The existing municipal building site measures only approximately one-quarter of an acre, though there are satellite sites adjacent to it. The Borough has presented the idea of re-utilizing the existing building and potentially adding a second floor as part of a redevelopment effort. Environmental constraints may make it suitable for non-residential development (such as the proposed municipal building), though full remediation has yet to be completed.

Scenario 1

Existing Zoning

The current R-2 zoning permits public buildings owned or leased by any unit of government. Per existing ordinance standards, the building would have to be set back 18.75 feet from Edgewood Terrace and 25 feet from Elizabeth Street. Taking rear and side yard setbacks into account, a relatively large building envelope would remain (approx. 9,500 square feet) before parking and buffering are taken into account.

Scenario 2

Municipal Zoning

The Black Belt site is oversized for its residential neighborhood and creates an eyesore, making it a prime redevelopment opportunity. The daytime, weekday nature of the use as a municipal building (and potentially adjacent police station) also make it a good candidate for location in a residential zone. However, the existing municipal garage would need to be relocated elsewhere due to space constraints and conflicts with surrounding land uses. Substantial buffering along the southern and eastern property lines would be appropriate where possible, given the surrounding residential uses. The eventual size of the building is largely dependent on the Borough's needs given the flexible nature of building size and coverage in that zone. The Borough should consider a full municipal facilities audit in anticipation of relocating its principal operations to this site to determine if essential operations could be consolidated elsewhere in the Borough. The size of the building and necessary number of parking spaces on the site would also be subject to these results.

Scenario 3

Limited Mixed-Use

A third option for the site would take advantage of its visible corner location and provide a mixed-use development consisting of neighborhood retail and upper floor residential units. The scale and scope would remain contextual to the surrounding residential area through moderate building height and limited size that would be reflected in a smaller parking area. Approximately 6,000 square feet of retail space could be provided on the ground floor, along with six upper-floor residential units. Smaller-scale one- and two-bedroom units would provide opportunities for workforce housing, or an alternative for Borough residents who may wish to downsize from a single-family house. A total of 15 to 20 surface parking spaces could be provided on site, including several spaces to be shared between residents and retail users during off-hours. The overall site FAR would be approximately 0.65 and impervious coverage would be reduced to approximately 70 percent. However, it is unclear whether the site will be suitable for residential use due to its environmental conditions.

Scenario 3: Mixed Use

- 6,458 sf retail
- 6,458 sf residential, 6 residential units
- Total parking area required: 7,319 sf
- Total parking spaces required: 27
- 6,458 sf building footprint
- Maximum impervious coverage: 76%, Site FAR: 0.69

Multimodal Transportation Improvements

This mobility assessment focuses on how best to integrate and improve the connections between South Bound Brook and Bound Brook for bicyclists and pedestrians, leverage opportunities for recreation and tourism along the D&R Canal and East Coast Greenway, and establish attractive gateways at principal access routes into the Borough. Improvement strategies are outlined below and illustrated on the map on the following page.

Recommendations

- Adopt Complete Streets policy
- Collaborate with Bound Brook Borough, Somerset County, NJDOT, the D&R Canal Commission, and other stakeholders to advance pedestrian improvements on the historic Queens Bridge and surrounding paths, better linking the downtowns of Bound Brook and South Bound Brook. Improvements include:
  - New pedestrian path on the Canal Bridge
  - New pedestrian lighting along the D&R Canal Towpath
  - New historic signage and wayfinding
  - Restoration of the historic Canal Bridge swing mechanism. Restoration of the bridge should account for the existing infrastructure
  - Install new crosswalk striping on the bridge. Crosswalk design and placement should be based on sight distances from both directions
  - Pedestrian-activated rectangular rapid flashing (RRFB) beacon where the D&R Canal Towpath traverses Queens Bridge
- Install wayfinding signage to direct users of the East Coast Greenway/ D&R Canal Towpath to local businesses and services
- Coordinate with the D&R Canal Commission and other partners to investigate opportunities to create a park between the towpath and the Raritan River with trails, river access, passive recreational opportunities, and historic/cultural integration such as the South Battlefield site
- Investigate gateway and integrated traffic calming treatments at four regional entrances to the Borough:
  - Easton Ave (CR 527) near Reid St
  - Easton Ave (CR 527) near Maple Ave (transition to commercial district)
  - Canal Rd (CR 623) near Van Syckle Boulevard
  - Elizabeth Street (CR 621) near the Franklin Township border
- Investigate implementing a consistent 25 mph speed limit through the Borough between Van Syckle Boulevard (Canal Road, currently 35 mph) and Reid Street (Easton Avenue, currently 25/30mph), in conjunction


Bound Brooks PGIA | South Bound Brook
Transportation Improvements
N
Bound Brook Train Station Transit Village designated area
Enhance pedestrian connectivity between the Boroughs with bridge path, lighting, and wayfinding improvements
Improve bicycle and pedestrian crossings
Investigate gateway treatments on main corridors into the Borough to transition traffic to lower speeds
Promote use of historic Staats House and investigate linkages to D&R Towpath
Enhance access to proposed park between towpath and the Raritan River
W High St
E 2nd St
John St
Hamilton St
East St
Chestnut St
Van Keuren Ave
Lamonte Ave
Romney Rd
North St
Drake St
Church St
Factory Ln
W Prospect St
Nassau St
Prospect St
Clinton St
High St
Kilcourse St
Van Sickle Blvd
Shields Ave
Madison St
Jerome Ave
Louis Ave
Sanders Ave
Cherry St
Warren St
Franklin St
Canal St
Jackson St
Maple Ave
Johnson St
Von Steuben Ln
Armstrong St
Cedar Ave
D&R Canal Towpath
Hall St
Cottontail Ln
635
533
623
610
621
607
622
527
287
Focus Area
Transit Village Boundary
Potential Improvements
Improve Pedestrian Crossing
Gateway /Traffic Calming Treatment
Path Connection
Streetscape Improvement
Park Improvement

with the proposed gateway treatment
    - » Investigate addition of traffic calming elements on Canal Road to help in speed reduction
- Investigate the installation of curb extensions to shorten crossing distances for pedestrians and to implement green infrastructure strategies, such as:
    - » At Canal Road/Main Street entrance to the community
    - » Along Main Street to enhance initial streetscape improvements and better define parking areas
    - » Proposed gateway improvements
- Promote the Staats House for recreational access to the Canal. Strategies include:
    - » Improve wayfinding signage
    - » Consider a secondary gateway treatment at the intersection of Von Steuben Lane and Route 527/ Main Street
    - » Investigate installation of a crossing of the D&R Canal, providing a connection between the Staats House and the Towpath
- Redevelopment within the proposed focus areas should maintain and enhance the urban fabric of the community. Buildings and their main entrances should be oriented towards the street frontage with minimal set-backs and parking located in the rear, thereby integrating pedestrian access and supporting the walkability of the community
- Develop a school travel plan to support Safe Routes to School (SRTS) initiatives. Work with Ridewise TMA to support SRTS initiatives

The Queens Bridge, connecting South Bound Brook and Bound Brook over the Raritan River

Improvement	Order of Magnitude Cost (Est.)	Time Frame	Potential Partners
The Bound Brooks PGIA | South Bound Brook Borough			
Adopt a Complete Streets policy	Low	Short	Borough
Investigate implementing a consistent 25 mph speed limit through the Borough on Canal Rd/Easton Ave between Van Syckle Blvd and Reid St	Low	Short	Borough / County
Develop school travel plan to support Safe Routes to School initiatives	Low	Short	Borough / RideWise
Install wayfinding signage to direct East Coast Greenway/D&R Towpath users to local businesses and services	Low	Med	Borough, D&R Canal Commission
Investigate installation of curb extensions at: Canal Rd/Main St entrance to the community and along Main St	Med	Med	Borough / County
Promote the Staats House through wayfinding, new D&R Canal bike/ped crossing, and secondary gateway at Von Steuben Ln and Route 527	Med	Med	Borough, County, D&R Canal Commission
Advance package of pedestrian improvements on the historic Queens Bridge and surrounding paths	High	Long	Borough, Bound Brook, Borough, County, NJDOT, D&R Canal Commission
Investigate opportunities to create a park between the towpath and the Raritan River with trails, river access, passive recreational opportunities, and historic/cultural integration	High	Long	Borough, Bound Brook Borough, County, D&R Canal Commission
Investigate gateways and integrated traffic calming at: Easton Ave (CR 527) near Reid St, Easton Ave (CR 527) near Maple Ave, Canal Rd (CR 623) near Van Syckle Blvd, and Elizabeth St (CR 621) near the Franklin Township border	Med	Long	Borough / County

NOTE:

Order of Magnitude Cost tiers:

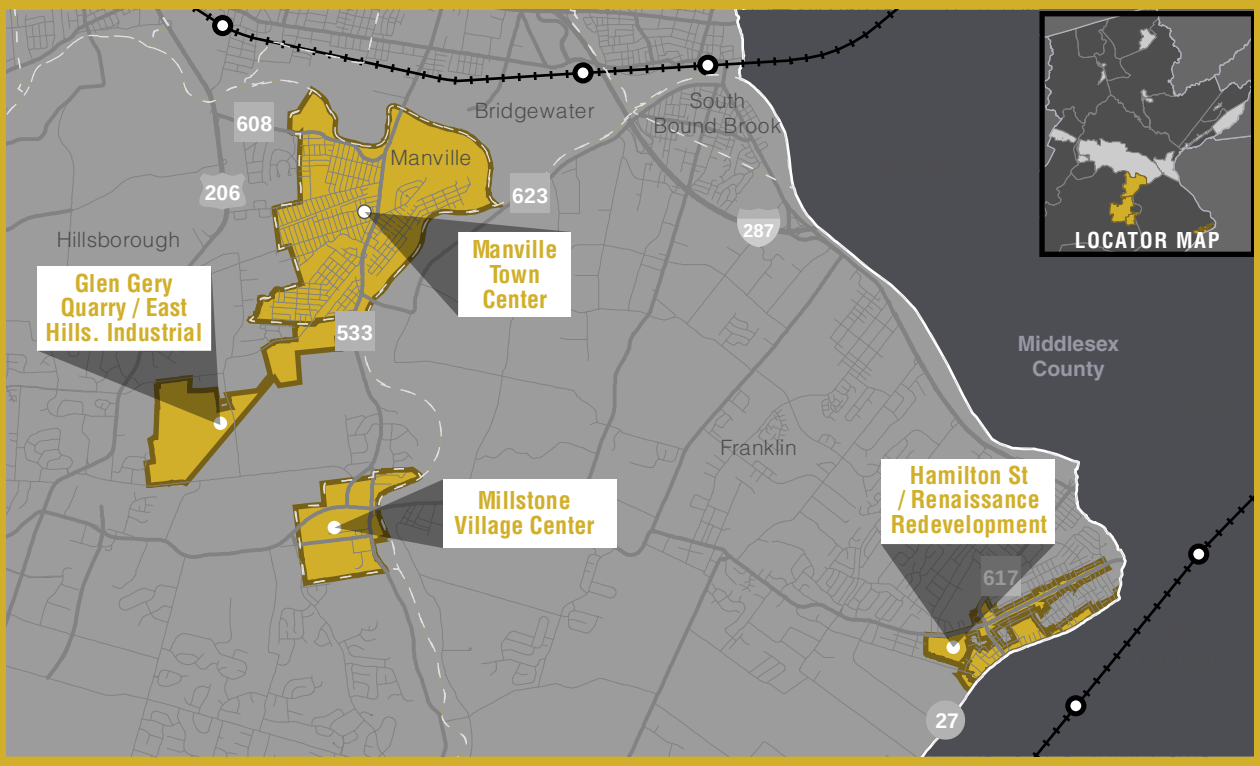
- Low: <$5M
- Medium: $5M - $25M
- High: >$25M

Time Frame tiers:

- Short: <3 year
- Med: 3-8 years
- Long: >8 years

Millstone Valley

Framework Plans



LPA Evaluation and Recommendations

GLEN GERY QUARRY EAST HILLSBOROUGH INDUSTRIAL

Description

Location / Hillsborough, NJ

Principal Roadways / CR-533, CR-514, Hamilton Road

Study Area Acreage / 882

Existing Uses / Airport, Open Space, Light Industrial, Light Residential

Current Zoning / Office (O-2), Corporate Development Zone (CDZ), Mining (M), Industrial (I-1)

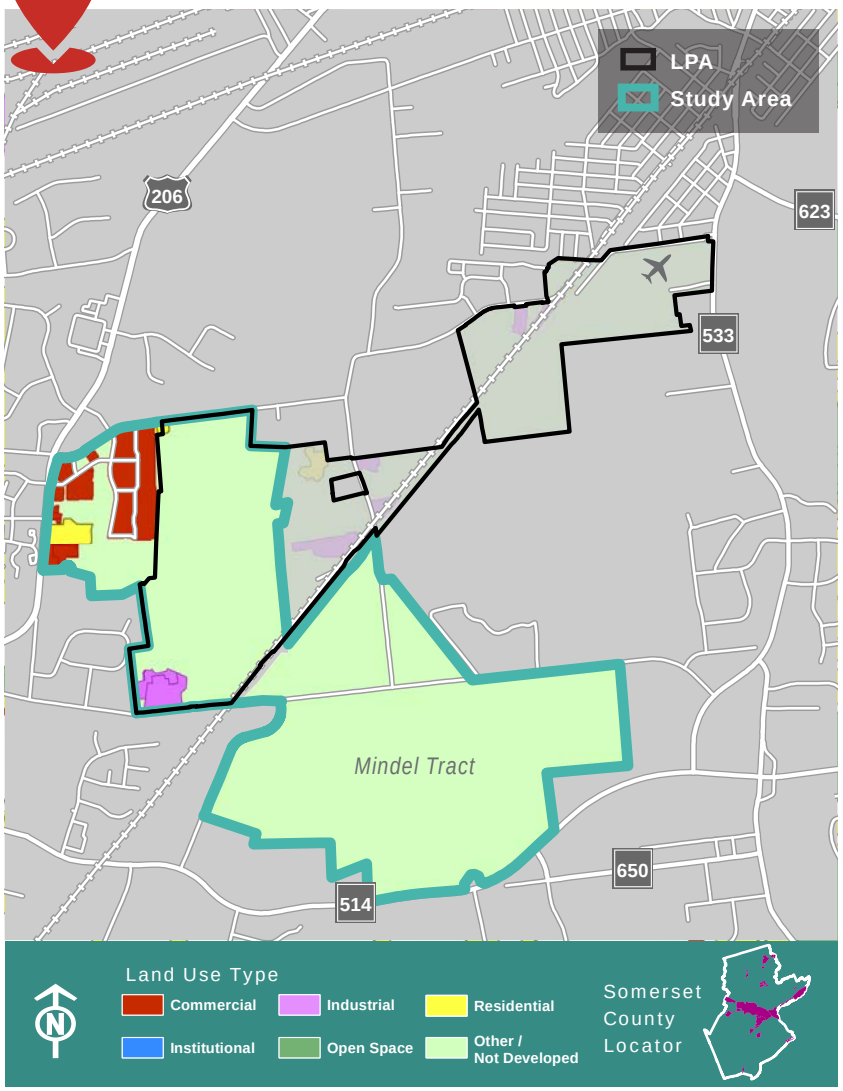
Complete Streets Policy / Yes

LPA Summary

A variety of land uses and activities are located in and around the LPA and surrounding area, including the former Glen Gery Quarry in the northwest corner, and Central Jersey Regional Airport. The study area is proximate to a variety of uses that attract significant numbers of visitors, or will likely in the future, including Duke Farms, the new County/Township park on the GSA Depot site and Sourland Mountain Preserve. The existing Hillsborough Promenade shopping center is located directly west of the Glen Gery Quarry site.

The study area should be developed in a way that supports rather than competes with the Hillsborough Town Center PGIA.

LPA Map



Multi-Modal Access Metrics

Transit Access

0.02

LIMITED TRANSIT SERVICE

Network Walking Reach

0.25

NOT WALKABLE

Access Summary

Multi-modal access metrics indicate an autocentric environment. There is no NJ TRANSIT bus or train service in the LPA. The LPA is not walkable due to a very low density of the roadway network and limited multimodal infrastructure and connectivity. A detailed analysis of the transportation infrastructure can be found in the Existing Conditions Technical Memorandum.

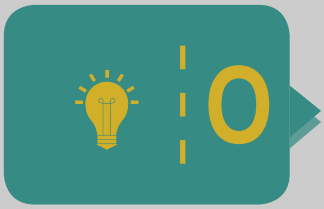
Investment Area Overview

Strengths

- Access to open space, preserved areas and historic resources
- Adjacent to Millstone Valley Scenic Byway
- Newly initiated Coach USA bus service for NYC commuters
- Municipality has a Complete Streets policy

Weaknesses

- Not served by rail transit
- Legacy zoning is outdated
- Not walkable due to limited roadway network and connectivity
- Diverse and incompatible zoning and land uses
- Limited roadway network
- Limited NJ TRANSIT bus or Somerset County shuttle services within or near the study area



Opportunities

- Preservation of open space
- Green infrastructure to support flood mitigation and reduce water pollution
- Leverage eco-tourism potential and proximity to Duke Farms
- Develop regional greenway and trail network linking cultural and historic assets in Millstone and Hillsborough
- New roadway links, traffic signals, trails, and multimodal linkages

Constraints

- Lies within an area requiring review by the D&R Canal Comission (DRCC Review Zone B)
- Has four streams and various wetlands
- Anticipated traffic impacts of new residential development north of Falcon Road
- CSX/West Trenton railroad line is a barrier to east/west circulation

Land Use and Planning Scenarios

Collaborative efforts examined two focus areas: the Glen Gery Quarry and Promenade Shopping Center located east of U.S. Route 206, and Mindel Tract located to the south of Hamilton Road. Scenario options may be combined in whole or part to create a broad spectrum of alternatives ranging from highest and best use, to moderate-scale, to preservation; and all are subject to existing environmental constraints.

The study area encompasses a large land mass and a variety of uses across a series of proposed scenarios (see map on following page). Legacy zoning within the Mindel Tract is decades old and includes portions of the corridor once preserved for the I-95 Somerset Freeway alignment. Although the Freeway was cancelled in 1980, existing zoning still permits large-scale nonresidential development, but Mindel lacks sewer service which greatly limits development options; large wetlands areas further constrain the amount of developable land.

Candidate preservation and development areas should be identified to protect critical wetlands and direct development to suitable areas. Combined with the regional trail concepts in the Millstone Village Center LPA, this strategy would utilize public, private, and preserved lands to create off-street linkages between Millstone and Hillsborough, support the growing interest in recreation and tourism within this portion of the County, and enhance connections between regionally significant trails and parks, including the D&R Canal Towpath, Duke Farms, and Royce Brook Greenway Corridor.

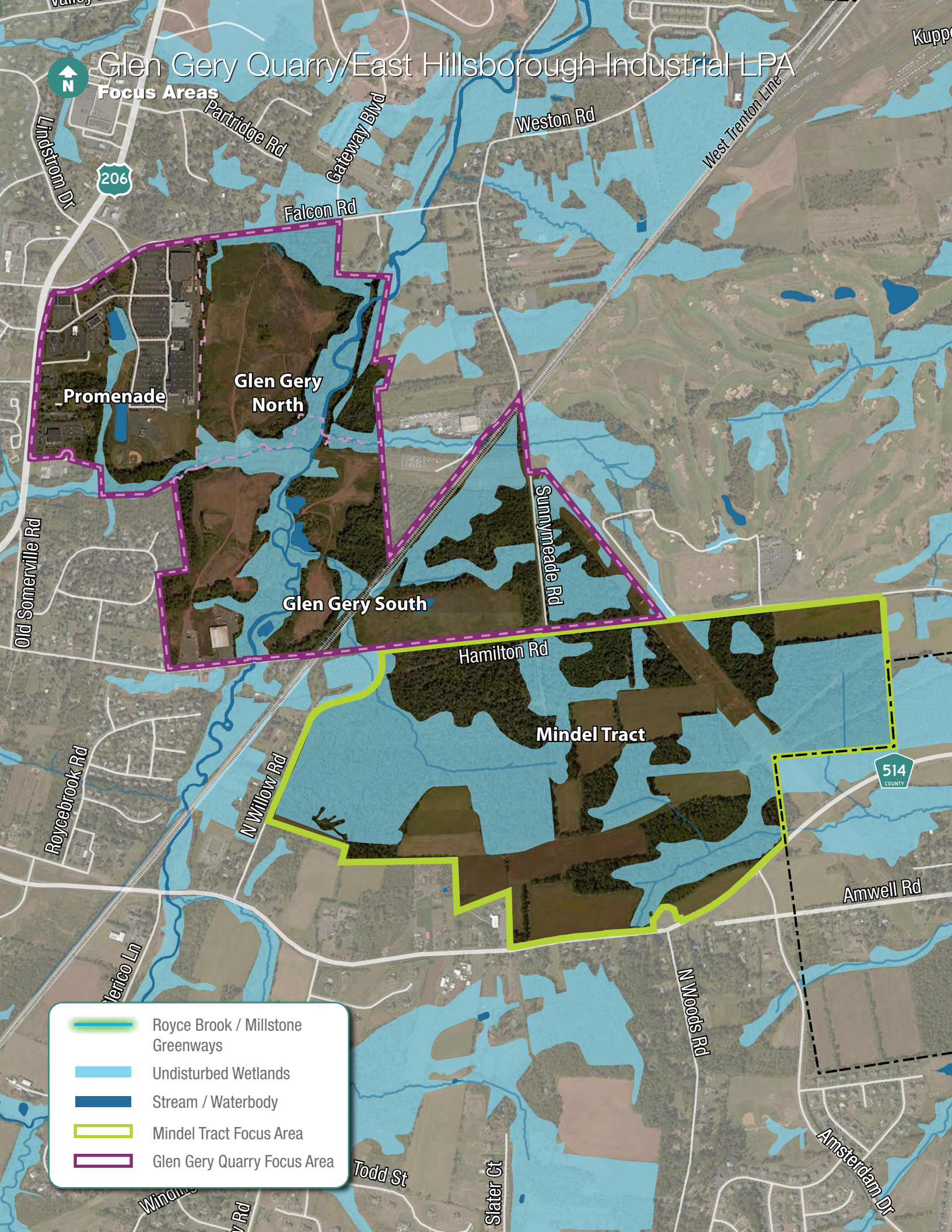
Royce Brook Greenway Corridor

The Royce Brook, a tributary of the Millstone River that traverses both Hillsborough and Manville, and presents an opportunity for an expansive greenway corridor. Stream restoration and corridor preservation strategies provides opportunities to enhance water quality throughout the watershed by mitigating runoff contamination related to adjacent land uses and activities, and can also serve as a demonstration area for a variety of green infrastructure concepts. The greenway concept also creates regional trail corridor connecting Hillsborough with Manville, Millstone, and the D&R Canal towpath.

The greenway corridor preservation concept should be advanced as a value-added improvement regardless of which scenario, zoning, or infrastructure changes are advanced or implemented. Local and regional benefits associated with Royce Brook greenway corridor preservation would extend across a large and diverse area.

Focus Area 1: Glen Gery Quarry

The overall Glen Gery site covers more than 300 acres and the quarry is no longer active. Although wetlands are present, the majority are considered disturbed/modified and therefore may not preclude new development. Glen Gery North could accommodate expansion of the adjacent Hillsborough Promenade shopping center, an approximately 60-acre parcel located to the west with access to U.S. 206; it is recommended that the study area be expanded to include the Hillsborough Promenade.


Glen Gery Quarry/East Hillsborough Industrial LPA
Focus Areas
N
Partridge Rd
Gateway Blvd
Weston Rd
West Trenton Line
Lindstrom Dr
206
Falcon Rd
Promenade
Glen Gery North
Glen Gery South
Sunnymeade Rd
Old Somerville Rd
Hamilton Rd
Mindel Tract
514
COUNTY
Roycebrook Rd
N Willow Rd
Amwell Rd
N Woods Rd
Amsterdam Dr
Todd St
Slater Ct
Royce Brook / Millstone Greenways
Undisturbed Wetlands
Stream / Waterbody
Mindel Tract Focus Area
Glen Gery Quarry Focus Area

Glen Gery South (located south of the Royce Brook tributary) is approximately 25 percent constrained by wetlands and stream areas, is bisected by the CSX West Trenton Subdivision rail line, and has vehicular access to both Sunnymeade Road and Hamilton Road. With a potential connection to U.S. 206, Glen Gery South could host a low-impact light industrial use, such as a data center, office support, or flex-space that would not generate a large amount of new truck traffic.

Scenario 1

Buildout of Glen Gery North under Existing Zoning

In addition to mining, the existing M zone permits a wide range of nonresidential uses, including those permitted in the General Industrial (GI) zone. Assuming that the property would be developed with office and research uses, nearly 800,000 square feet of floor area would be permitted (even after accounting for wetlands) in buildings up to five stories.

Scenario 2

Integrate Development of Glen Gery North with Promenade Shopping Center

The Glen Gery North property could be developed as an expansion of the shopping center, which could serve as the main access route. Although both sites lack visibility from U.S. 206, this has not been an impediment to Promenade's success as a destination center. Alternatively, if the environmental constraints are insurmountable, the additional square footage could be developed on the existing Promenade site, which has ample parking and opportunities for additional connectivity, with open space preserved at Glen Gery North.

Initial Recommendations

- A buildout analysis based on existing development regulations for a community shopping center, as permitted in the O-2 zone, would permit ~250,000 square feet of retail space
- An additional connection to U.S. 206 and other site improvements could provide for enhanced traffic circulation and access for this scenario
- A buffer should be provided along Falcon Road to minimize impacts to existing dwellings and maintain the character and context of the area

Scenario 2: Expansion of Promenade Shopping Center

- 259,182 sf retail, 259,182 sf building footprint
- Total parking spaces required: 864 (1 per sf of GFA)
- Maximum impervious coverage: 60%
- Site FAR: 0.1

Scenario 3

Glen Gery North Neighborhood Scale Retail / Health and Wellness Hub

Retail options for Glen Gery North could be scaled down to primarily serve local residents with a neighborhood-oriented, rather than regional, focus and complement the adjacent big-box stores. As larger health systems are seeking to expand from large campuses to more local nodes for patients not requiring overnight care, there is also an opportunity

for new zoning to promote a health and wellness-oriented concept including medical offices, outpatient surgery centers, and/or physical therapy, which would not compete with surrounding retail uses (including the Town Center). Due to the environmental constraints, development scenarios might consider a greenbelt of park and open space extending to the existing ballfields and Township-owned open space to the south of the Promenade.

Initial Recommendations

- Include 150,000 to 200,000 square feet of commercial space including retail, medical offices, ambulatory care, physical therapy, and/or fitness centers, arranged in a more traditional neighborhood pattern with sidewalks and rear parking areas
- There may be an opportunity for a future mid-size development to serve both local neighborhoods and the surrounding Hillsborough community
- Use green infrastructure to protect sensitive areas (40 percent impervious coverage)

Scenario 3: Neighborhood Scale Retail / Health and Wellness Hub

- 207,346 sf retail
- Total parking area required: 221,169 sf
- Total parking spaces required: 691 (1 per sf GFA)
- 207,346 sf building footprint
- Maximum impervious coverage: 40%
- Site FAR: 0.08

Scenario 4

Low-Impact Data Center or Light Industrial at Glen Gery South

Glen Gery South includes properties in the southern portion of the quarry. With the exception of the eastern-most lot (located in the CDZ zone), the bulk of the area is located in the M zone, which also permits development in accordance with the GI district, including a variety of office, warehousing, research, restaurants, and general light industrial uses where activity is confined to indoor areas. The GI standards are generally flexible, and the only major building requirement is a maximum impervious coverage area of 60 percent.

Initial Recommendations

- Using Township standards and assuming a typical low-density modern development, approximately 1.2 million square feet of warehouse, data center, or flex spaces could be constructed on the site, with ancillary retail/office spaces
- The relatively low impact of the proposed uses accommodates approximately 1,000 surface parking spaces without impacting the area's stream corridors or wetland areas
- Explore enhanced connection to U.S. 206 for ease of access to site

Scenario 4: Low-Impact Data Center or Light Industrial

- 63,608 sf Office
- 826,910 sf Data Center /Support
- 318,042 sf Flex/ Warehouse
- 63,608 sf Ancillary retail
- Total parking spaces required: 1,173
- Maximum impervious coverage: 60%, FAR 0.25

Focus Area 2: Mindel Tract

The Mindel Tract is comprised of a ±423 acre tract, nearly 50 percent constrained by wetlands and stream areas, and located in the Corporate Development Zone (CDZ) district, which permits offices, hotels, restaurants and other nonresidential uses as principal uses, and other larger scale and/or more intense uses (including research and development, light industrial, airports, golf courses) as conditional uses. The CDZ zoning is no longer appropriate for the area due to the lack of highway access and general market conditions. In addition, the environmentally sensitive features on this site preclude a large area from being included in a sewer service area as per the new water quality management rules.

The *Somerset County Investment Framework* designates this area as part of the County Preservation Area with no sewer service, significantly limiting growth options, consistent with Hillsborough's emphasis on development of the Town Center area. The three proposed scenarios factor in the site's location outside the existing sewer service area, and recognize the limited demand for the types of uses permitted by the existing zoning in this portion of the County; each scenario applies to the full Mindel Tract area.

Scenario 1

Mindel Tract Buildout under Existing Zoning

Development in accordance with the property's current CDZ zoning could consist of one or more various nonresidential uses. Existing zoning initially envisioned office development in three to five story buildings, totaling 1.5 million square feet of floor area on the developable portions of the property. This amount would be the approximate maximum permitted after factoring in parking and other zoning requirements. This type of development would not be appropriate nor desirable at the present time due to market and site conditions.

Scenario 2

Preservation Scenario

The Mindel tract's environmental constraints and location make it a candidate for preservation as a large open space area that could be integrated with a potential Millstone Village LPA regional trail scenario, using a combination of public, private, and preserved lands to create off-street linkages between Millstone and Hillsborough. This type of active preservation would also support the County's plans for recreation and tourism.

Initial Recommendations

- Focus new development in non-constrained locations surrounding the Mindel tract but within LPA boundaries; explore possible zoning or regulatory techniques to leverage development in surrounding area with costs of preserving the tract
- Promote connections to parks and other attractions in Hillsborough and nearby communities, particularly Millstone Borough and Franklin Township to the east
- Create linkages between regional trails and parks (e.g., D&R Towpath, Duke Farms)
- Take advantage of the site's location and large size to utilize it as a green infrastructure resource that benefits a wider area (e.g., stormwater management, flood mitigation)

Scenario 3

Clustered Residential

If future market conditions make residential development a viable alternative for the Mindel tract, a low-density residential designation, potentially with clustering, may be feasible particularly as a mechanism to address continuing needs for workforce housing and affordable options. Two nodes with frontage on Amwell and Hamilton Roads, respectively, are logical development sites for low-density single-family residential, the larger along Amwell Road measures approximately 25 acres in size and is located slightly west of the intersection with N. Woods Road. The second, smaller node measures approximately 18 acres with frontage on Hamilton Road between N. Willow Road and Sunnymeade Road.

Single-family development clustered in these two nodes would allow for connections to existing development in the vicinity due to their frontage along major roads. The environmental impact could be further minimized by exploring eco-clustering techniques, where residential development would consist of smaller lots with the same overall residential density. Not only would this preserve additional land, the developers' road and infrastructure costs may be reduced. Therefore the same number of homes could be built on less land, and the amount of utilities to be provided would be reduced, which could potentially be spent on preservation elsewhere on the site.

Initial Recommendations

- Single-family clustering per existing zoning standards would yield between 60 and 120 residences split between the two nodes, but could be much less based upon the nitrate dilution standards of the new water quality management rules for non-sewer areas
- In lieu of individual septic systems for each residential unit, an on-site treatment facility severing the cluster development would be required
- Preserve the vast majority of the site in a way that would connect existing and proposed open space via a network of trails and greenways from the northern to southern nodes and west to east across the property to Millstone Borough
- Explore eco-cluster options above and beyond existing Township clustering options

Scenario 3:Clustered Residential

R Density

- Developable area: 2,474,600 sf
- Number of lots (cluster): 124
- Number of lots (non cluster): 57
- Residential Density (units/acre): 0.85

R- 1 Density

- Developable area 2,474,600 sf
- Number of lots (cluster): 165
- Number of lots (non cluster): 124
- Residential Density (units/acre): 1.5

Multimodal Transportation Improvements

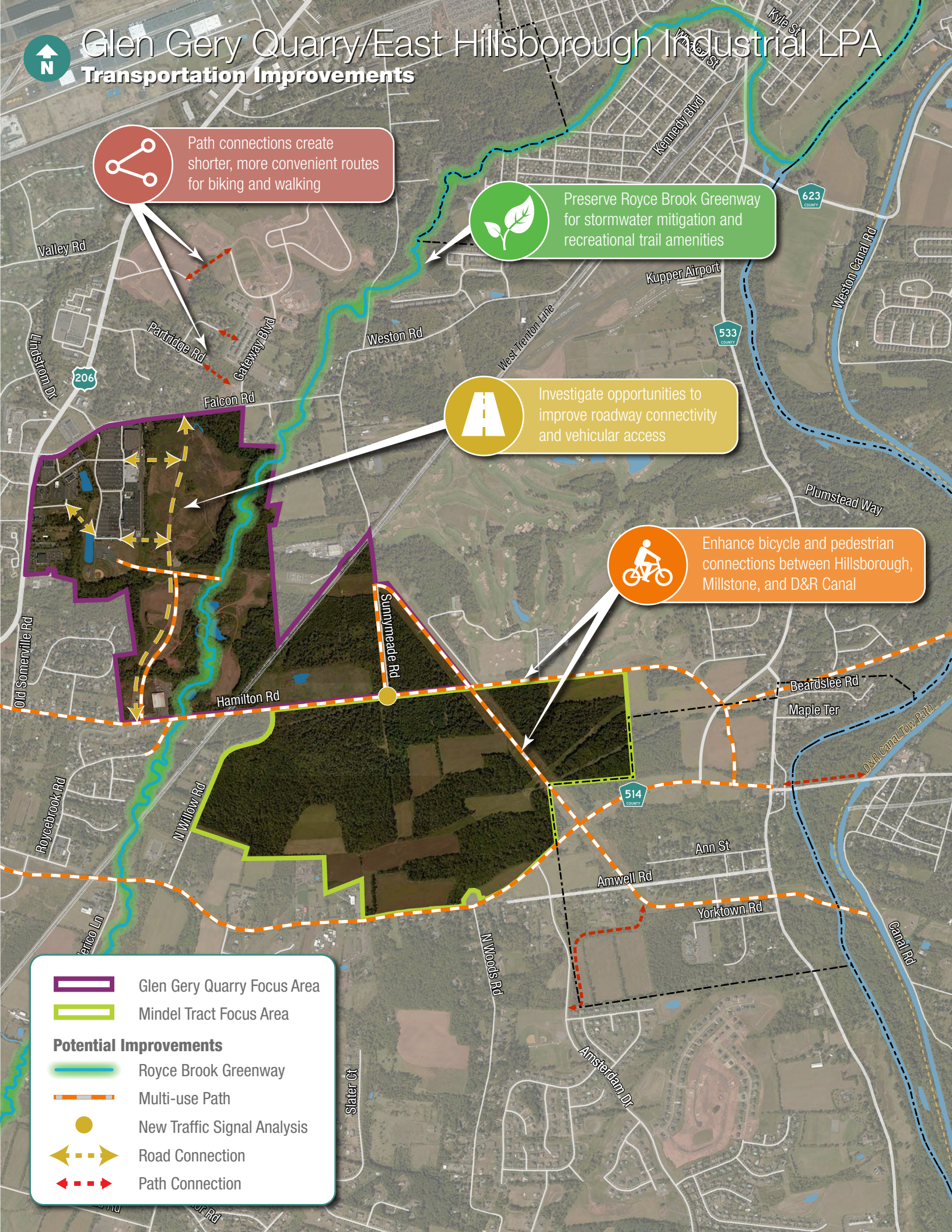
The proposed mobility concepts seeks to improve multimodal access that supports the proposed targeted redevelopment concepts in Hillsborough, as well as broader open space and preservation needs across the region, including linkages with the Millstone LPA. Improvement strategies are outlined below and illustrated on the map on the following page.

Proposed Roadway Connections

- Conduct traffic signal warrant analyses to investigate new traffic signals at the intersection of Sunnymeade Road and Hamilton Road
- Investigate a new north/south roadway using the alignment of the internal Glen Gery access road, connecting from Hamilton Road to Falcon Road. This would enable access to the Hillsborough Promenade from the south, dispersing trips from U.S. 206 and Sunnymeade Road
- Consider creation of an east/west internal roadway bisecting the existing Promenade buildings to improve site circulation and service potential new development options at the rear (east side) of the Promenade shopping area
- Investigate opportunities for an additional access point from U.S. 206 to the Hillsborough Promenade using one or more of the three existing bridge structures over the detention area at the southwest corner of the parking lot

Bicycle and Pedestrian Connections

- Investigate potential multiuse paths along the area's rural east/west highways. These roadways tend to be higher speed (typically 45 mph) and higher volumes roadways. As a result, a facility separated from motor vehicle traffic is preferred to provide a comfortable facility for most cyclists, and a multiuse path is in keeping with the largely rural context. Potential paths include along:
  - Hamilton Road and within the County-owned tract located north of Amwell Road and east of the Route 533 Bypass. This would provide a connection from Hillsborough at or near the U.S. 206/Town Center Area to the intersection of Amwell Road (CR 514) and Main Street (CR 533), and the CR 514 Causeway over the Millstone River to the D&R Canal Towpath. It would also provide access to this historic County property, supporting opportunities for historic tourism and recreation
  - Amwell Road (CR 514), linking Hillsborough Town Center (U.S. 206) with Millstone and the D&R Canal
- Investigate potential to use utility and fire access ROWs for bicycle and pedestrian access, including existing facility at Hamilton Road west of the


Glen Gery Quarry/East Hillsborough Industrial LPA
Transportation Improvements
N
Path connections create shorter, more convenient routes for biking and walking
Preserve Royce Brook Greenway for stormwater mitigation and recreational trail amenities
Investigate opportunities to improve roadway connectivity and vehicular access
Enhance bicycle and pedestrian connections between Hillsborough, Millstone, and D&R Canal
Kyle St
Winter St
Kennedy Blvd
623
Valley Rd
Kupper Airport
Weston Canal Rd
Partridge Rd
Gateway Blvd
Weston Rd
West Trenton Line
533
Lindstrom Dr
206
Falcon Rd
Plumstead Way
Old Somerville Rd
Sunnymeade Rd
Hamilton Rd
Beardslee Rd
Maple Ter
D&R Canal Tow Path
514
Roycebrook Rd
N Willow Rd
Ann St
Amwell Rd
Yorktown Rd
Canal Rd
N Woods Rd
Amsterdam Dr
Slater Ct
Glen Gery Quarry Focus Area
Mindel Tract Focus Area
Potential Improvements
Royce Brook Greenway
Multi-use Path
New Traffic Signal Analysis
Road Connection
Path Connection

Royce Brook and within the Royce Brook Park property

- Investigate pedestrian and bike-only connectors between residential areas at Partridge Road, Grouse Road, and Treeman Drive to the Gateway Circle and Kulina Circle residential areas, providing an alternate to U.S. 206. This creates a more direct, comfortable, and convenient route to the commercial development at the Hillsborough Promenade

Royce Brook Greenway Corridor

The Royce Brook, a tributary of the Millstone River in Manville, presents an expansive corridor across much of the Glen Gery Quarry/East Hillsborough Industrial LPA that should be preserved as a greenway. Opportunities exist to enhance water quality throughout the watershed through mitigation of stormwater runoff contamination related to adjacent land uses and activities. The greenway can serve as a demonstration area for a variety of green infrastructure improvement concepts. It would also be considered an amenity and regional trail connector linking Hillsborough with Manville, Millstone, and the D&R Canal Towpath.

The greenway corridor preservation concept should be advanced as a value-added improvement regardless of which scenario, zoning, or infrastructure changes are advanced or implemented. The Royce Brook greenway corridor preservation would extend across a large area and provide benefits both locally and regionally.

Design Considerations

Design should be consistent with the historical context and natural resources of the area. Maintaining a preservation ring of open space to the east side of Hillsborough and west side of Millstone will protect the rural and historic character around the Millstone Valley National Scenic Byway.

A wayfinding signage system, for both motorized and non-motorized traffic, should be installed to support tourism and highlight the area's historic, natural, and recreational resources. The system should be coordinated with the Millstone Valley Scenic Byway, D&R Canal, Duke Farms, and existing interpretive signage/ installations and local sites to support eco-tourism.

Utilize low-impact design and green infrastructure strategies as a component of roadway and site design:

- Use permeable surfaces for off-road path facilities
- Incorporate infiltration strips, bioswales, native plantings, and other best management practices to mitigate, treat, and manage stormwater along roadways, parking areas, and new development
- Investigate opportunities for collaboration with Rutgers University to design and implement a local demonstration project on low-impact design strategies for flood mitigation. Investigate potential to collaborate with U.S. Department of Agriculture's (USDA) Agricultural Conservation Easement Program (ACEP)

Improvement	Order of Magnitude Cost (Est.)	Time Frame	Potential Partners
Glen Gery Quarry / East Hillsborough Industrial LPA			
Investigate pedestrian and bike-only connectors between residential areas at Partridge Road, Grouse Road, and Treeman Drive to the Gateway Circle and Kulina Circle residential areas	Low	Short	Township / Developer
Conduct traffic signal warrant analyses for the intersection of Sunnymeade Road and Hamilton Road	Low	Med	Township
Investigate potential multiuse path on Hamilton Road and within the County-owned tract located north of Amwell Rd and east of the Route 533 Bypass	Low	Med	Township / County
Investigate potential multiuse path on Amwell Road (CR 514)	Low	Med	County / Township
Investigate new north/south roadway using the alignment of the internal Glen Gery access road, connecting from Hamilton Road to Falcon Road	Med	Long	Developer / Township
Investigate creation of an east/west internal roadway bisecting the existing Promenade buildings	Med	Long	Township / Developer
Investigate opportunities for an additional access point from U.S. 206 to the Hillsborough Promenade	Med	Long	NJDOT / Township / Developer
Investigate potential to use utility and fire access ROWs for bicycle and pedestrian access at Hamilton Road west of the Royce Brook and within the Royce Brook Park property	Med	Long	Township / County / Utility Company

NOTE:

Order of Magnitude Cost tiers:

- Low: <$5M
- Medium: $5M - $25M
- High: >$25M

Time Frame tiers:

- Short: <3 year
- Med: 3-8 years
- Long: >8 years

MILLSTONE VILLAGE CENTER

Description

Location / Millstone Borough, NJ

Principal Roadways / CR-533, CR-514

Acreage / 410

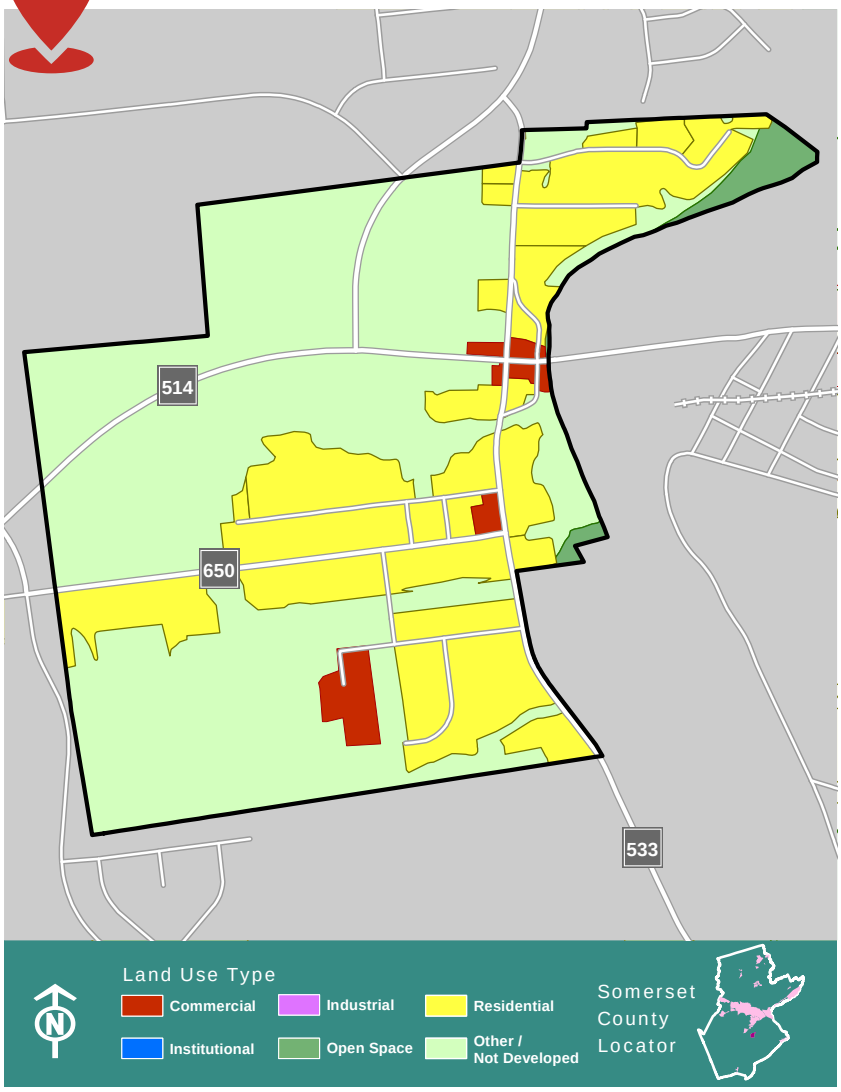
Existing Uses / Residential, Small Commercial District, Open Space

Complete Streets Policy / No

LPA Summary

The Millstone Village Center framework plan focuses solely on transportation improvement options. The Borough is a small community along the Millstone River. Located at the northern terminus of the Millstone Valley National Scenic Byway, the community has significant historical, cultural, and natural resources dating back to the Revolutionary War Era and is linked by network and built environment features to neighboring Hillsborough and Manville. There is a significant focus on preservation to maintain the historic character of the area, scenic viewsheds, water quality, and sensitive ecosystems. However, mobility improvements can help leverage these assets to support tourism and recreation opportunities, while still enhancing the essential historic and scenic qualities.

LPA Map



Multi-Modal Access Metrics

Transit Access

0.00

NO TRANSIT SERVICE

Network Walking Reach

0.28

SLIGHTLY WALKABLE

Access Summary

Multimodal access metrics indicate an autocentric environment. There are no existing NJ TRANSIT bus or train service within the LPA. The LPA is slightly walkable due to a low density of roadway network. The limited roadway connectivity and relatively long distances between intersections discourage walking and bicycling, and contribute to high traffic volumes. A detailed analysis of the transportation infrastructure can be found in the Existing Conditions Technical Memorandum.

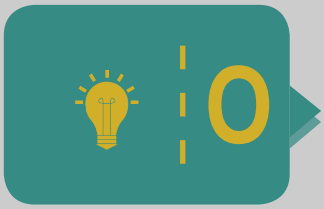
Investment Area Overview

Strengths

- Access to D&R Canal
- Cultural and historic resources
- Part of Millstone Valley National Scenic Byway
- Small town character and cohesive community environment
- Parks and open space account for the highest percentage of the Borough's land use by area, providing a valuable recreational and natural resource for residents and visitors

Weaknesses

- No public transit access
- Topography, lack of street network connectivity, and limited sidewalks and shoulders, constrain walkability
- Eight percent of the LPA is in 100-year flood risk zone
- Only one existing river crossing and it lacks multimodal access
- Lacks a Complete Streets policy

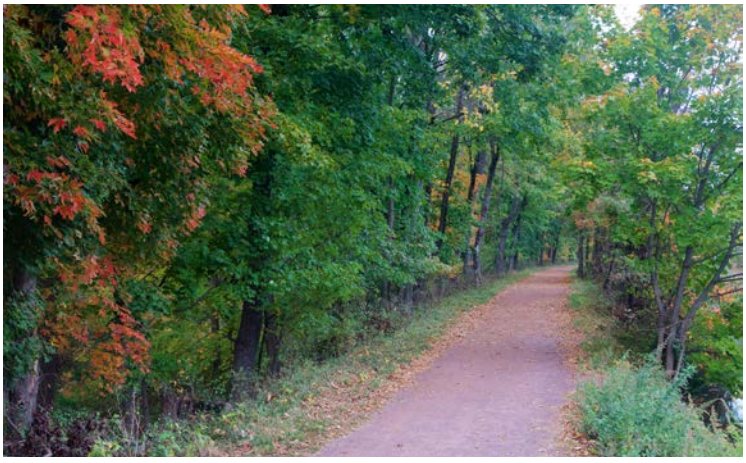


Opportunities

- Improve access to and strengthen preservation of cultural and historic assets
- Potential for regional trail and path connections to link the community to Hillsborough, Manville, and Franklin
- Adopting a Complete Streets policy to support multimodal transportation projects
- Preservation and greenway concept for the Royce Brook, as a part of the Glen Gery Quarry LPA, provide regional benefits to Millstone Borough

Constraints

- Millstone River and D&R Canal limit access to the east of the LPA
- Topography and flooding issues constrain developable lands and mobility options



Top Left: The Millstone Village Center LPA includes many historic homes and quiet residential streets

Top Right : The Millstone Valley National Scenic Byway

Middle: The Millstone Forge Museum, one of the historic buildings in the LPA

Bottom: The D&R Canal Towpath entrance at Amwell Road just outside the Millstone Village Center LPA

Multimodal Transportation Improvements

The proposed mobility concepts leverage the area's natural and historic resources and support development of a regional multimodal network. Fully integrated and coordinated with the improvement concepts for the adjacent Glen Gery Quarry/ North Hills Industrial LPA and Manville Town Center PGIA, the recommendations support open space and preservation needs across the entire area.

Active transportation infrastructure can create attractive amenities for residents, visitors, and employers; provide regional economic benefits related to tourism and recreation; and support improved public health. The improvements both enhance multimodal travel options within Millstone, and improve connections to neighboring communities, the D&R Canal Towpath, Colonial Park, Six Mile Run, and other major destinations. Improvement strategies are outlined below and illustrated on the map on the following page.

Bicycle and Pedestrian Connections

- Adopt a Complete Streets policy
- Investigate potential multiuse paths along the area's rural east/west highways. These roadways tend to be higher speed (typically 45 mph) and higher volumes roadways. As a result, a facility separated from motor vehicle traffic is preferred to provide a comfortable facility for most cyclists, and a multiuse path is in keeping with the largely rural context. Potential paths include along:
  - Hamilton Road and within the County-owned tract located north of Amwell Road (CR 514) and east of the Route 533 Bypass. This would provide a connection from Hillsborough at or near the U.S. Route 206/Town Center Area to the intersection of CR 514 and Main Street (CR 533), and the CR 514 Causeway over the Millstone River to the D&R Canal Towpath. It would also provide access to this historic County property, supporting opportunities for historic tourism and recreation.
  - Amwell Road (CR 514), linking Hillsborough Town Center with Millstone and the D&R Canal
- Investigate opportunities to utilize existing utility rights-of-way (ROW) for off-road bicycle and pedestrian facilities, including:
  - Power lines ROW, providing a connection to Hillsborough at the Promenade and a crossing of the Millstone River to the D&R Canal Towpath south of Millstone village
  - Pipeline ROW north of Millstone village, providing a connection to the proposed multiuse path along Hamilton Road and a crossing of the Millstone River with connections to the D&R Canal Towpath, Colonial Park, and Franklin Township
- Investigate opportunities to enhance bicycle and pedestrian mobility and access along River Road/Main Street (CR 533) to the Village Center, such as traffic calming elements and/or a multiuse path; limited right-of-


Millstone Village Center LPA
Transportation Improvements
N
Investigate use of utility ROWs to enhance regional off-road path network
Investigate reuse of old bridge abutment and new bike/ped bridge over Millstone River
Enhance bicycle and pedestrian connections between Hillsborough, Millstone, and D&R Canal
Investigate opportunities for a multiuse path and/or traffic calming
Plumstead Way
Franklin Dr
Onka Dr
Claremont Dr
Anne St
Sunnymeade Rd
Hamilton Rd
Beardslee Rd
Maple Ter
533
N River St
Market St
Franklin St
Elm St
Ann St
650
Colonial Rd
Yorktown Rd
D&R Canal Towpath
Canal Rd
514
N Woods Rd
Amsterdam Dr
Gumble Ct
Country Classics Fields
Cain Dr
Burniston Ct
French Dr
Murphy Dr
Potential Improvements
Multi-use Path
Path Connection

way may constrain options to widen segments of the existing sidewalk

- Investigate opportunities to construct a bicycle and pedestrian crossing of the Millstone River and D&R Canal parallel to Amwell Road (CR 514), reusing an existing bridge abutment on North River Street that remains from a previous structure
- Install a multiuse path connecting the proposed path along the utility line ROW to the existing bicycle lanes on Amsterdam Road and Country Classics Fields
- Install a multiuse path connecting the proposed path along CR 514 to the Ann Street Park

Design Considerations

Design should be consistent with the historical context and natural resources of the area. Maintaining a preservation ring of open space to the west side of Millstone will protect the rural and historic character around the Millstone Valley National Scenic Byway.

A wayfinding signage system, for both motorized and non-motorized traffic, should be installed to support tourism and highlight the area's historic, natural, and recreational resources. The system should be coordinated with the Millstone Valley Scenic Byway, D&R Canal, Duke Farms, and existing interpretive signage/ installations and local sites to support eco-tourism.

Utilize low-impact design and green stormwater strategies as a component of trail, roadway, and redevelopment site design, including:

- Use permeable surfaces for off-road path facilities
- Incorporate infiltration strips, bioswales, rain gardens, and other best management practices to mitigate, treat, and manage stormwater along roadways, parking areas, and new development
- Restore forest, wetlands, and native plantings to reduce peak stormwater flows and mitigate flooding

Existing CR 514 causeway is too narrow to accommodate a bicycle facility

Improvement	Order of Magnitude Cost (Est.)	Time Frame	Potential Partners
Millstone Village Center LPA			
Adopt Complete Streets policy	Low	Short	Borough
Investigate potential multiuse path on Amwell Road (CR 514)	Low	Med	County / Borough
Install a multiuse path connecting the proposed path along the utility ROW to existing bicycle lanes on Amsterdam Road and Country Classics Fields	Low	Med	Borough / Utility Company / Developer
Install a multiuse path connecting Ann Street Park to Amwell Road	Low	Med	Borough / Utility Company / Developer
Install a wayfinding signage system, for both motorized and non-motorized traffic to support tourism	Low	Med	Borough
Investigate opportunities to enhance bicycle and pedestrian mobility along River Road/Main Street (CR 533)	Low	Med	Borough / County
Investigate potential multiuse path on Hamilton Rd and within County-owned tract located north of Amwell Rd (CR 514) and east of the CR 533 Bypass	Low	Long	Borough / County
Investigate opportunities for a bicycle and pedestrian crossing of the Millstone River and D&R Canal parallel to Amwell Road (CR 514), reusing an existing bridge abutment on North River Street	Low	Long	Borough / County / D&R Canal Commission
Investigate opportunities to utilize pipeline ROW for off-road multiuse path north of Millstone village	Low	Long	Borough / County Utility Company
Investigate opportunities to utilize aerial utility ROW for off-road multiuse path, providing a connection to Hillsborough at the Promenade and a crossing of the Millstone River to the D&R Canal Towpath south of Millstone village	Low	Long	Borough / County / Utility Company

NOTE:

Order of Magnitude Cost tiers:
- Low: <$5M
- Medium: $5M - $25M
- High: >$25M

Time Frame tiers:
- Short: <3 year
- Med: 3-8 years
- Long: >8 years

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MANVILLE TOWN CENTER

Description

Location / Manville Borough, NJ

Principal Roadways / CR-533, CR-608, CR-623

Acreage / 1568

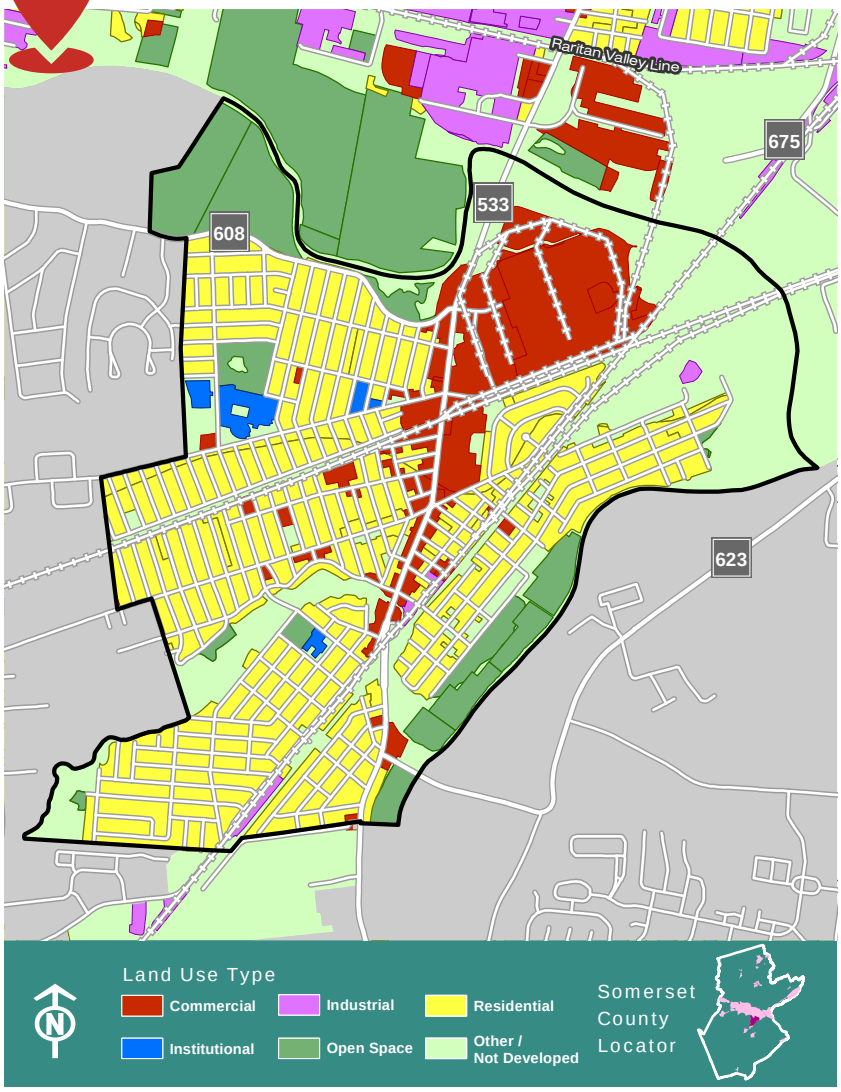
Existing Uses / Residential, commercial

Complete Streets Policy / Yes

PGIA Summary

Manville offers access to a variety of natural and recreational assets within or in close proximity to the Borough, including the Raritan and Millstone Rivers, the D&R Canal, and Duke Farms. However, given the Borough's location at the confluence of the two rivers and its relatively flat topography, it is also plagued by frequent flooding events and many residential properties have been acquired recently to mitigate repetitive flood damage losses. The flood-plain buyout presents the opportunity for a combination of green infrastructure, flood mitigation, habitat restoration, improved water quality, regional greenway, and recreational elements.

PGIA Map



Multi-Modal Access Metrics

Transit Access

0.02

LIMITED TRANSIT SERVICE

Network Walking Reach

0.43

SLIGHTLY WALKABLE

Access Summary

Multi-modal access metrics indicate an autocentric environment within the overall PGIA. There is no NJ TRANSIT bus or train service in the PGIA. The PGIA is slightly walkable due to a low density of roadway network, and street connectivity limitations created by the railroad lines, geographic barriers, and waterways. A detailed analysis of the transportation infrastructure can be found in the Existing Conditions Technical Memorandum.

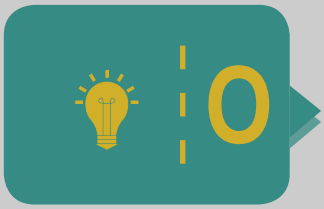
Investment Area Overview

Strengths

- The PGIA has a robust local street grid and walkable, traditional downtown core
- Municipality has a Complete Streets policy
- Access and proximity to natural and recreational assets, including the Raritan and Millstone Rivers, Royce Brook, and D&R Canal Towpath provide recreation opportunities

Weaknesses

- High crash rates along CR 533 and especially at CR 533 at Brooks Boulevard
- Lack of regional and local public transit services
- There are no dedicated on-street bicycle facilities within the PGIA
- Areas of the Borough are prone to flooding and limit development opportunities
- Legacy infrastructure in flood prone areas requires costly maintenance but limited direct benefits



Opportunities

- Collaborate with the D&R Canal Commission, and large land holders to plan and connect to a regional greenway network along the Raritan and Millstone Rivers and the Royce Brook
- Rebrand “Lost Valley” to amplify connection to the Raritan and Millstone Green corridors
- A road diet project planned for Main Street (CR 533) presents the opportunity to bring transformational change and reduce crashes in Manville along the corridor

Constraints

- The Raritan and Millstone Rivers create geographic barriers that limit roadway connectivity between the PGIA and points north and east
- Roadway connectivity is reduced by Royce Brook and two railroad lines that traverse the PGIA
- 35% of the investment area is in the 1% flood risk zone

Multimodal Transportation Improvements

The Supporting Priority Investment in Somerset County Phase III Study focuses on broad, community-wide strategies for the Manville PGIA that leverage the Borough's proximity to local and regional natural, scenic, and recreational assets. Combined with the upcoming Main Street road diet project, recent flood area buyouts, and redevelopment options, these assets present the opportunity for Manville to rebrand itself and reshape its future as a destination for recreation and active transportation options.

Currently vacant and underutilized properties can be reused as hubs for active recreation and serve as host locations for watersport and bicycle rental vendors. Visitors can also quickly access local dining and convenience options, enabling these start-up ventures to serve as catalysts for longer term expansion and redevelopment. In addition to recreation, a regional greenway system can improve connections to neighboring municipalities and major destinations, and mitigate stormwater and flooding through green infrastructure strategies. Implementation of the greenway and supporting green infrastructure can help reduce the volume and velocity of storm run-off, protect land in flood-prone areas, provide additional flood storage capacity, and support greater on-site water infiltration with native vegetation.

The mobility strategies include three primary components, as described below and illustrated on the map on the following page.

Greenway Network

The Borough should work with the County, neighboring municipalities, the D&R Canal Commission, and large land holders to plan a local greenway network along the Raritan and Millstone Rivers and the Royce Brook, which can be integrated into a broader, regional greenway system. A combination of context-driven strategies and improvements could be implemented over time, to establish the regional greenway system as an interconnected, off-road trail system that provides recreational opportunities and enhances access to multiple towns and a variety of local and regional destinations, including the Regional Center, D&R Canal, and Duke Farms.

Key strategies of the Greenway Network include:

- Design paths based upon expected usage, local context, soil conditions and other environmental conditions. Material may vary by segment. Integrate and provide linkages to existing and planned elements of the Raritan River Greenway, the Peter's Brook Greenway, and the D&R Canal Towpath
- Coordinate possible reuse of existing, County-owned abandoned railroad bridges over the Raritan River for bicycle and pedestrian use. This provides a lower cost alternative to new construction and productive reuse of existing infrastructure
- Collaborate with and support County initiatives to work with property owners and investigate use of undeveloped portions of Elizabethtown Water properties as critical elements of the greenway network, connecting sections along both the Raritan and Millstone Rivers. Work with railroad operators, as necessary, to mitigate potential issues with proposed greenway crossing active railroad lines. The "Rail with Trails" concept is a common one, and the Rails to Trails Conservancy has demonstrated that the concept can be implemented in ways that provide both mobility and safety, and without interference to either rail or trail use
- Integrate green infrastructure elements throughout the greenway, such as minimal impervious cover; capture and mitigate stormwater run-off at the source through bioswales, pervious strips, and other applicable best management practices; facilitate and encourage restoration of forests, wetlands, and native vegetation along previously developed parcels; promote protection and restoration of pollinators, particularly where compatible with farm and garden uses
- Implement greenway wayfinding system and interpretive elements that highlight both valuable natural features and historic locations in order to promote the greenway as a destination, enhance its use, and facilitate navigation and access. Integrate and coordinate signage with County initiatives for a regional greenway network
- Investigate use of a portion of the former Rhythms restaurant site as a location for a weekend water sports and/or bicycle rental vendors or kiosks. The activity could encourage and nurture river and trail access activity and support rebranding of Manville as a recreation and outdoor activity destination, with access to local dining, retail, and convenience establishments
- Integrate the Royce Brook corridor as an element of the greenway system, providing a connection to Hillsborough Township


Manville Town Center PGIA
Transportation Improvements
N
Investigate and collaborate with other stakeholders to develop a greenway network along the Raritan and Millstone Rivers and the Royce Brook
Investigate removal of hard infrastructure within the "Lost Valley"
Develop Borough Open Space Plan, including a holistic park and recreation plan for repurposing the "Lost Valley" area
Investigate bicycle and pedestrian bridge over the Royce Brook
Investigate former restaurant site as a location for water sports and / or bicycle rentals
Potential Improvements
Remove Hard Infrastructure
Path Connection
Regional Greenway
Outdoor Recreation Center
S Bridge St
S Adamsville Rd
Fairmount Ave
Dukes Pkwy E
N 13th Ave
Brooks Blvd
W Camplain Rd
Bridge St
Roosevelt Ave
Whalen St
Kyle St
Lincoln Ave
Raritan Ave
Kennedy Blvd
Haran Ave
D&R Canal Towpath
612
633
533
675
28
206
623

Rebrand the "Lost Valley"

The neighborhood along Lincoln, Boesel, and Huff Avenues is prone to flooding. Many residential properties have been bought back and are now vacant. While there is recreational open space along Lincoln Avenue, its current design, combined with recently vacant properties, creates significant maintenance needs for the Borough. This open space is an integral element of the proposed Millstone River Greenway, and provides opportunities for both passive and active recreation.

Key strategies for this area, which is referred to as the "Lost Valley", include:

- Rebrand as a Millstone Valley scenic preservation and recreation space to amplify its connection to the Raritan and Millstone Greenway corridors, and emphasize the inherent natural and scenic qualities of the area
- Develop a holistic plan for a Borough park and recreational area that integrates existing open space, recently bought-back properties, and the Millstone Greenway. Potential uses within the park could include a dog park, multiuse paths, river access and ramps for kayaking or fishing, and/or community gardens
- Explore opportunities to relocate the existing playing fields to another area in the Borough
- Develop an overarching, Borough-wide Open Space Plan to show how the proposed new park within the "Lost Valley" relates to the Borough's other open space and recreation properties
- Investigate construction of a bicycle and pedestrian bridge over the Royce Brook to provide more direct access from the park to the west. The bridge could be aligned with Haran Avenue, the site of a previous temporary bridge structure
- Emphasize resiliency and green infrastructure strategies to mitigate flooding in the area, including:
  - » Investigate removal of hard infrastructure that is no longer needed due to the recent buy-back program, such as paving, underground drainage, and utilities along Lincoln Avenue
  - » Restore forest, wetlands, and native plantings to reduce maintenance needs (e.g., mowing), reduce peak stormwater flows, improve infiltration of storm run-off, and mitigate flooding
  - » Intersperse or buffer playing fields with native plantings to reduce lawn coverage and enhance stormwater management
- Provide opportunities for businesses supporting active recreation and tourism. This could include small kiosks within the park or permitting businesses without permanent infrastructure, such as seasonal or mobile businesses for kayak or bicycle rentals
- Coordinate the Borough's activities in this area with the County to utilize existing County-owned open space

Bird's eye view of the "Lost Valley" focal area

Community Green Infrastructure Program

In addition to the greenway, incorporate green infrastructure throughout the community to mitigate flooding issues. Strategies include:

- Implement small-scale pilot projects to demonstrate concepts and educate residents
- Encourage reduction in impervious cover
- Encourage use of native plantings throughout the community, such as retrofitting traditional retention basins with native plantings to create bioswales and rain gardens that reduce stormwater flows and improve infiltration

Improvement	Order of Magnitude Cost (Est.)	Time Frame	Potential Partners
Manville Town Center PGIA			
Greenway Network			
Implement greenway wayfinding system and interpretive element	Low	Med	Borough / County
Investigate use of a portion of the former Rhythms restaurant site for recreation-supportive commercial uses	Low	Med	Borough / Developer
Plan, design, and implement greenway network, including integration of green infrastructure strategies	High	Long	Borough / County / Others
Rebrand the "Lost Valley"			
Rebrand the "Lost Valley"	Low	Med	Borough / County
Develop a holistic plan for a Borough park and recreational area, integrating green infrastructure strategies	Low	Med	Borough
Develop Borough-wide Open Space Plan	Low	Med	Borough
Coordinate the Borough's activities in the area with the County to utilize existing County-owned open space	Low	Med	Borough / County
Investigate removal of hard infrastructure that is no longer needed	Low	Long	Borough
Investigate construction of a bicycle and pedestrian bridge over the Royce Brook to provide more direct access from the park to the west	Low	Long	Borough
Community Green Infrastructure Program			
Implement small-scale pilot projects	Low	Med	Borough
Encourage use of native plantings and reduction in impervious cover	Low	Med	Borough

NOTE:

Order of Magnitude Cost tiers:

- Low: <$5M
- Medium: $5M - $25M
- High: >$25M

Time Frame tiers:

- Short: <3 year
- Med: 3-8 years
- Long: >8 years

PGIA Evaluation and Recommendations

RENAISSANCE REDEVELOPMENT

HAMILTON ST

Description

Location / Franklin Township, NJ

Principal Roadways / NJ 27, CR-617, CR-514

Acreage / 320

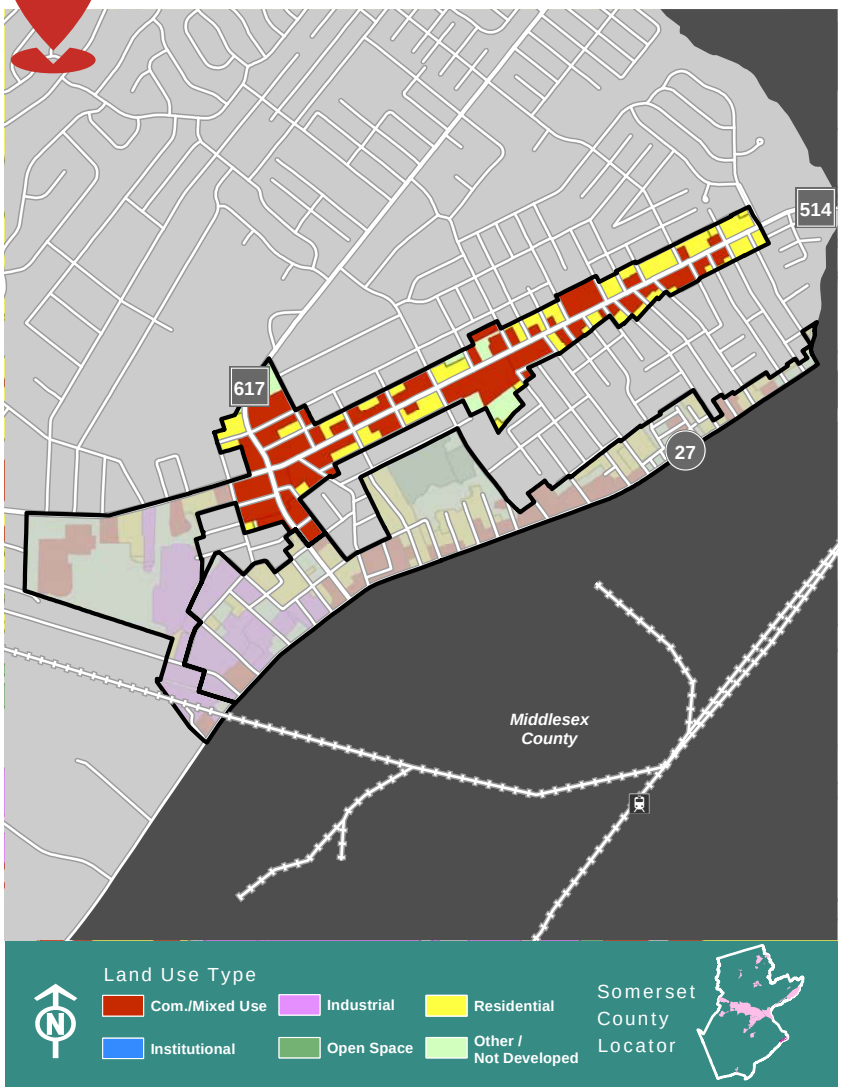
Existing Uses / Residential, Commercial Corridor, Warehousing

Complete Streets Policy / No

PGIA Summary

The Hamilton Street (CR 514) corridor was chosen as the focus area of this PGIA. This corridor includes a mix of commercial and residential uses, including traditional commercial adjacent to the road frontage, strip commercial plazas designed with significant front-yard parking, single-family and multi-family housing, and mixed-use buildings with first floor commercial and upper floor residential. Dense neighborhoods of single-family, detached homes are located to the north and south of the corridor. The Hamilton Street corridor provides convenient access to downtown New Brunswick approximately 0.8 miles to the east, including the Rutgers University campus, Robert Wood Johnson University Hospital, and the New Brunswick train station on the Northeast Corridor.

PGIA Map



Multi-Modal Access Metrics

Transit Access

0.34

MODERATE TRANSIT SERVICE

Network Walking Reach

0.45

SLIGHTLY WALKABLE

Access Summary

Multi-modal access metrics indicate an autocentric environment across the broader PGIA. Although there are no NJ TRANSIT services in the PGIA, the PGIA is served by Somerset County's CAT and DASH bus routes and Middlesex County's MCAT route. NJ TRANSIT's New Brunswick and Jersey Avenue train stations are within one mile of the PGIA. While the corridor is relatively dense, it scores as slightly walkable due to gaps and fragmentation of the roadway network, which limit connectivity. A detailed analysis of the transportation infrastructure can be found in the Existing Conditions Technical Memorandum.

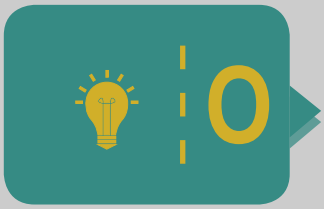
Investment Area Overview

Strengths

- Proximity to New Brunswick, Rutgers University, hospitals, and Northeast Corridor rail services
- Access to New Jersey Route 27
- Compact development, which facilitates bicycle and pedestrian improvements

Weaknesses

- Pedestrian crash history along Hamilton Street (6 pedestrian and 3 bicyclist crashes during 3-year period 2012-2014; identified by NJTPA Local Safety Program Network Screening)
- Narrow right of way on Hamilton Street constrains widening for multimodal improvements
- Lack of parallel street network alternatives to Hamilton Street
- Many cul-de-sacs and short street links limit overall street network connectivity
- Lacks municipal Complete Streets policy



Opportunities

- Enhance multimodal access through bicycle and pedestrian-only linkages and development of a bicycle boulevard network
- Support local business and neighborhood commercial corridor
- Use corridor to better connect New Brunswick and Franklin
- Leverage proximity to New Brunswick employment hubs, transportation links, and Rutgers University
- Seek funding for Road Safety Audit (RSA) on Hamilton Street
- Utilize the Mile Run Brook as a greenway
- Promote findings of the Strategic Zoning and Economic Development Recommendations Study

Constraints

- There are 14 known contaminated sites within the PGIA
- Mile Run Brook limits roadway connectivity to the east of the PGIA
- Hamilton Street roadway width limits on-street bicycle facility options

Multimodal Transportation Improvements

The proposed transportation improvements focus on enhancing multimodal mobility. These strategies seek to strengthen Hamilton Street as a neighborhood commercial corridor, improve linkages to major destinations and employment hubs in New Brunswick, and enhance safety for all roadway users. Improvement strategies are outlined below and illustrated on the map on the following page. Adoption of a Complete Streets policy would also support these efforts.

Hamilton Street Corridor

- Investigate shared-lane markings, connecting to existing markings in New Brunswick and emphasizing use of the roadway by bicyclists
- Repair deteriorating and/or heaved sidewalk sections
- Widen sidewalk (min. 10 feet) in front of commercial properties (e.g. Nora Shopping Center) to encourage pedestrian activity and accommodate street furniture, kiosks, and other amenities
- Enhance pedestrian crossings with curb extensions to improve visibility, shorten crossings, and slow traffic. Integrate green stormwater features into curb extensions, when feasible
- Upgrade traffic signal equipment to include pedestrian signal heads with countdown timers
- Build upon recent streetscape improvements by installing high-visibility, continental crosswalks and ADA-compliant curb ramps at unmarked crossings along the corridor
- Incorporate bicycle parking into streetscape
- Require bicycle parking with new development activity
- Replace improperly sited street trees and install additional street trees along the corridor, particularly along the westbound side where there are fewer conflicts with utilities
- Investigate opportunities to expand transit access along the corridor, such as NJ TRANSIT and/or Rutgers University bus service. Prioritize locations for potential stops and develop a design concept for integrating bus pull-outs
- Install bus stop signage

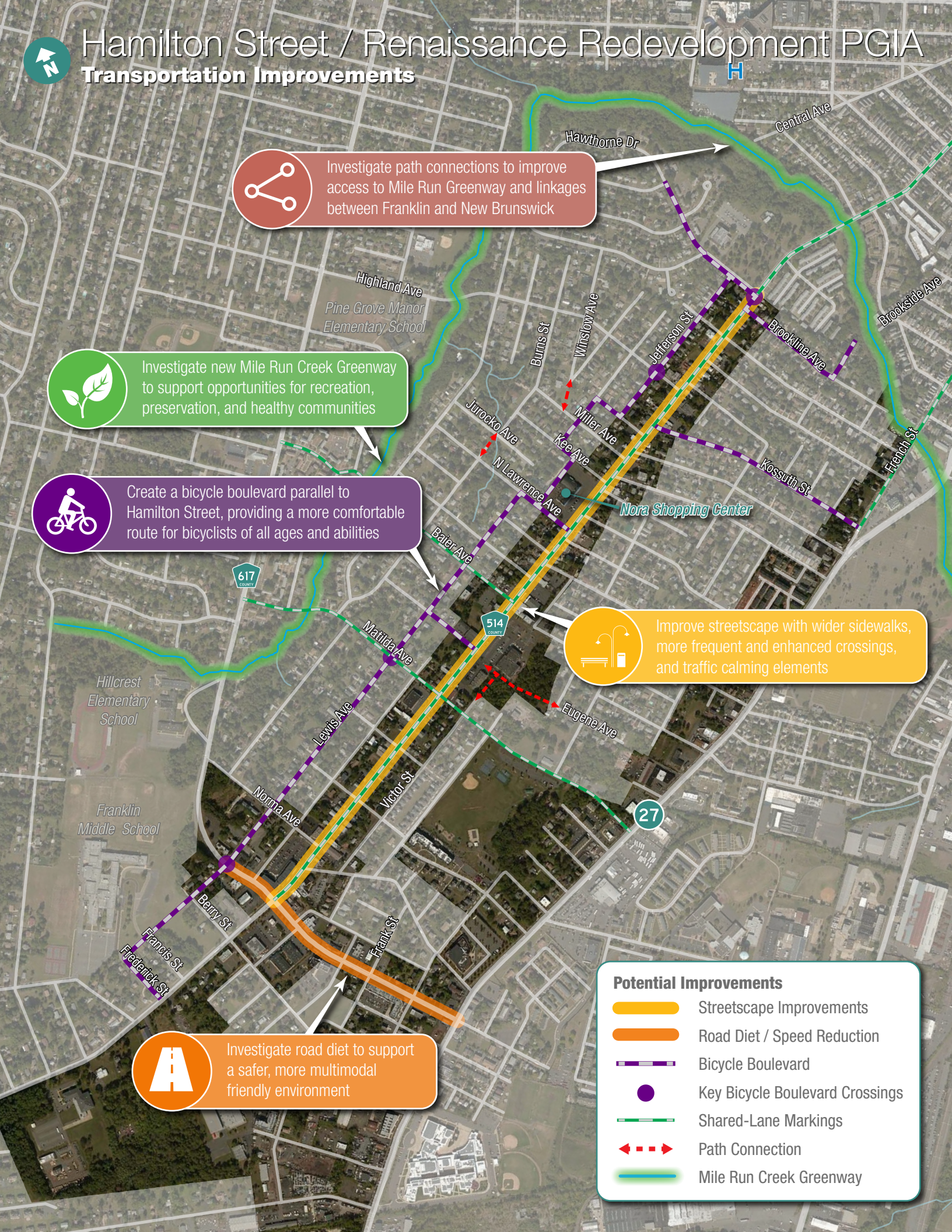
Lewis Street Bicycle Boulevard

Lewis Street provides a relatively continuous, parallel route one to two blocks north of Hamilton Street along the majority of the corridor. Designating and designing the route as a bicycle boulevard will prioritize bicycle movement, create a bicycle route comfortable for most bicyclists, and provide convenient access to commercial destinations along Hamilton Street, the Franklin Middle School, and connections into New Brunswick.

Hamilton Street / Renaissance Redevelopment PGIA

Transportation Improvements

H



Design considerations include:

- Consider 20 mph speed limit
- Install wayfinding signage and bicycle boulevard pavement markings
- Introduce traffic calming elements to reinforce low traffic speeds
- Provide crossing improvements of Franklin Boulevard, such as marked crossings, Rectangular Rapid Flashing Beacons (RRFBs), and median island to slow traffic speeds
- Install a multi-use path between Frederick Street and Berry Street, creating more direct access to the Middle School, and extending the bicycle boulevard concept for a greater distance
- Install contraflow bicycle lane on Lewis Street between Franklin Boulevard and Norma Avenue, connecting the bicycle boulevard through a one-block, one-way segment
- Mark and sign the crossings of Matilda, Baier, and Highland Avenues
- Leverage redevelopment of the Nora Shopping Center as an opportunity to route the bicycle boulevard across the rear of the property. This would provide the most direct connection between the current network gap between North Lawrence Avenue and Kee Avenue, route bicyclists more directly and conveniently to commercial destinations, and extend the bicycle boulevard farther via Green and/or Jefferson Streets

Enhance Multimodal Connectivity

- Provide bike/ped-only linkages to enhance network connectivity:
  - » Burns Street between Jurocko Avenue and North Lawrence Avenue
  - » Between Winslow Avenue and Miller Avenue
- Provide bike/ped connection from Eugene Avenue and Victor Street to the rear and side, respectively, of the Hamilton Street Center shopping plaza. These connections would require cooperation from the property owner and/or could be incorporated into future development activity to provide more direct bike/ped access from the surrounding neighborhoods.
- Fill gaps in sidewalk network in the surrounding residential neighborhoods
- Investigate opportunities to utilize the Mile Run Creek as a greenway to support recreation, mobility, and conservation. The corridor links New Brunswick, residential neighborhoods, and several schools
- Investigate opportunities to enhance bike/ped connectivity between Franklin and New Brunswick with bike/ped-only, prefabricated structures crossing over Mile Run Creek

Franklin Boulevard

- Investigate lowering the speed limit between NJ 27 and Lewis Avenue (currently 40 mph). This section has denser development patterns and development closer to the roadway than the section north of Lewis Avenue
- Investigate a road diet between Hamilton Street and NJ 27, as discussed in the following section
- Fill sidewalk gaps between Ellen and Frank Streets, south of Field Street, and between Fuller Street and NJ 27

Bicycle Boulevard Design

Bicycle boulevards are linear corridors of interconnected, traffic-calmed streets where bicyclists are afforded a high level of safety and comfort. Many local streets have existing low motor vehicle travel speeds and volumes that form the basic components of a comfortable bicycling environment. These streets can be enhanced to create a bicycle boulevard. Many of these treatments benefit not only bicyclists, but all users of the street by supporting a safe and quiet environment.

Bicycle boulevard treatments prioritize travel for bicyclists by simplifying navigation and discouraging high vehicle speeds and volumes while still accommodating local access. Some bicycle boulevards also include links for bicyclists that are not open to vehicular traffic. Intersection crossing treatments are also crucial to creating more comfortable streets for users of all ages and abilities.

The following design treatments, where applicable, are the primary strategies to support a bicycle boulevard.

Reduced Speed Limits

The maximum speed limit for a bicycle boulevard is 25 mph; however, a speed limit of 20 mph or lower is preferred.

Signage and Markings

Signage, pavement markings, and wayfinding convey that the corridor is intended as a shared, slow street, prioritize bicycle movement, and help cyclists navigate the corridor.

Speed Management

Traffic calming elements reinforce slow travel speeds along the corridor and create a more comfortable cycling environment consistent with local context.

Volume Management

Volume management techniques discourage motor vehicle through traffic on designated bicycle boulevards. Bicycle boulevards should be designed for traffic volumes under 1,500 vehicles per day.

(left) Photo simulation of a bicycle boulevard in Princeton, NJ, includes pavement markings, wayfinding, and traffic calming; (right) Bicycle boulevard on Haven Avenue in Ocean City, NJ, has a 15 mph speed limit and uses curb extensions and a raised median to slow traffic and reduce cut-through traffic along this local residential street.

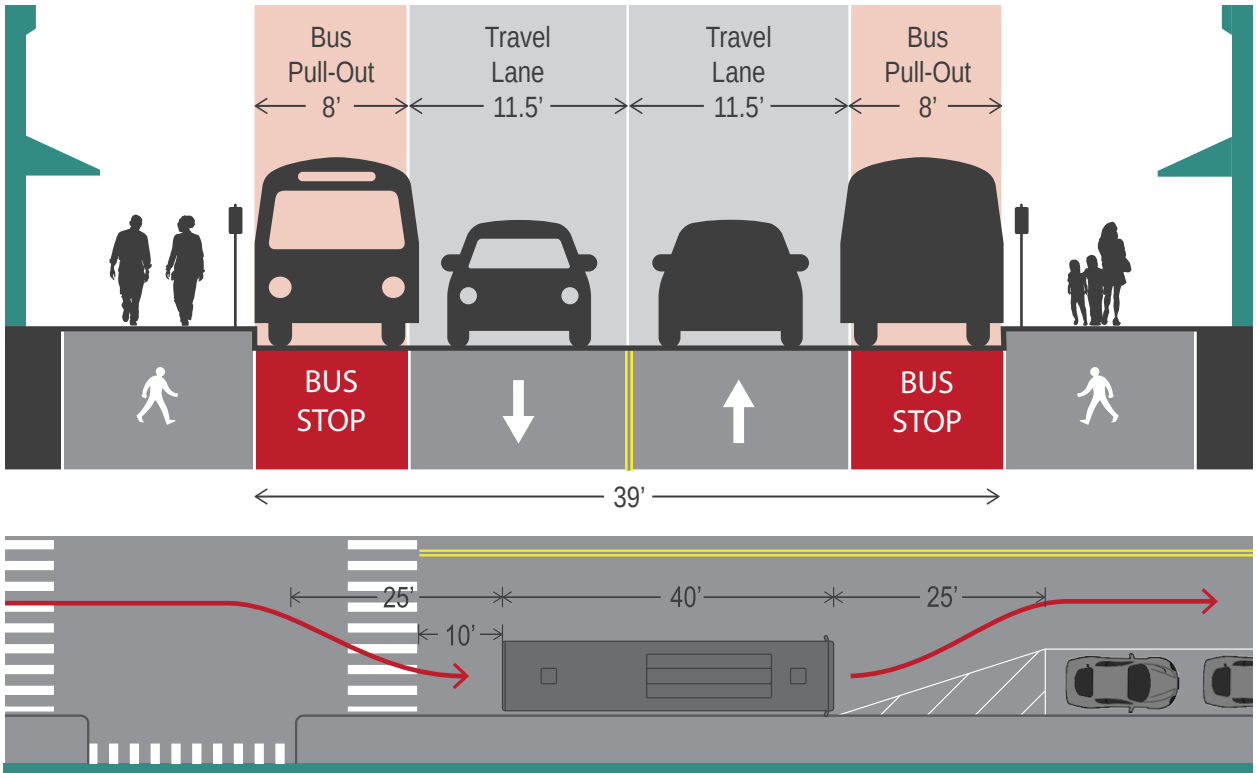
Transit Stop Design

As Hamilton Street continues to undergo redevelopment and increase in density, the Township should continue to coordinate with NJ TRANSIT, Somerset County, and Rutgers University to explore opportunities for bus transit services along the corridor. Bus service would enhance the multimodal aspect of the corridor and increase transportation options for accessing Rutgers University, employment hubs, nearby train stations, and downtown New Brunswick.

Provision of bus services would require minor alterations to the roadway and streetscape to better accommodate bus stops and transit passengers at key destinations along the corridor.

At each stop, on-street parking would be prohibited in order to provide bus pull-outs. Bus pull-outs facilitate convenient, curbside boarding/alighting for passengers while still enabling through traffic to pass relatively unimpeded. Depending on the unique characteristics of a stop location, bus stops may be sited midblock or on the near-side or far-side of an intersection. Stops at intersections would require removal of approximately three parking spaces, while midblock stops may require removal of approximately five spaces.

Each stop should include signage and lighting. Additional passenger amenities, such as seating, a transit shelter, and traveler information are also preferred. The sidewalk should be wider at bus stop locations in order to accommodate transit passenger activity and amenities while maintaining a minimum 5-foot wide through travel zone for pedestrians.



(top) Typical cross-section for a transit stop along Hamilton Street (bottom) Example layout of a far-side bus pull-out stop (NACTO Transit Street Design Guide)

Franklin Boulevard Road Diet Analysis and Conceptual Design

A road diet, or right sizing, is a low cost method of reconfiguring the existing roadway space to improve safety, enhance multimodal mobility, and support local community needs while still efficiently moving traffic. Road diets typically involve reducing the number of vehicle lanes from four to three and reallocating the remaining space to on-street parking, pedestrian and streetscape improvements, bicycle lanes, transit accommodations, or shoulders.

The Federal Highway Administration (FHWA) endorses road diets as a proven safety countermeasure and they are becoming standard practice in New Jersey. Forty-seven road diet projects have been implemented in New Jersey in the last five years, including Washington Avenue (CR 529) in Green Brook in 2016.

The benefits associated with road diets include:

- Improved safety for all roadway users
  - » Fewer conflict points
  - » Reduced crash frequency by 19 percent to 43 percent (FHWA)
  - » Reduced crash severity
- Provide space for improved accommodations for bicyclists, pedestrians, and/or transit passengers
- Reduced and more consistent vehicle speeds
- Provides a pedestrian-friendly streetscape, supporting the local economy and quality of life

Analysis

Franklin Boulevard has an annual average daily traffic (AADT) of 13,748 vehicles (2015) and approximately 665 vehicles per hour per direction (VPHPD) during the peak hour (2016 analysis). Both metrics are within general feasibility guidelines for identifying and advancing road diet candidates. To further investigate potential impacts on traffic flow, the project team collected peak hour turning movement traffic counts and conducted a microsimulation analysis for the signalized intersections at Hamilton Street and NJ Route 27.

The analysis compared the level-of-service (LOS) and delay for each intersection approach in the existing condition and the proposed road diet scenario. As shown in the table below, the analysis indicates essentially no negative impact to the operation of the intersections, as the existing LOS is maintained with the road diet in place.

Capacity Analysis for Road Diet Concept

	Existing LOS		Road Diet LOS	
	AM	PM	AM	PM
Franklin Blvd at Hamilton Street				
Franklin Blvd NB	F	F	F	F
Franklin Blvd SB	F	F	F	F
Hamilton St EB	F	F	F	F
Hamilton St WB	E	F	E	F
Franklin Blvd at NJ Route 27				
Oliver Ave NB	C	C	C	C
Franklin Blvd SB	D	C	D	C
NJ 27 EB	C	C	C	C
NJ 27 WB	C	C	C	C

The analysis also indicates that the Hamilton Street intersection currently operates at a peak hour LOS F. Reevaluating and optimizing the signal timing may be considered as a part of the road diet implementation for this intersection.

Conceptual Design

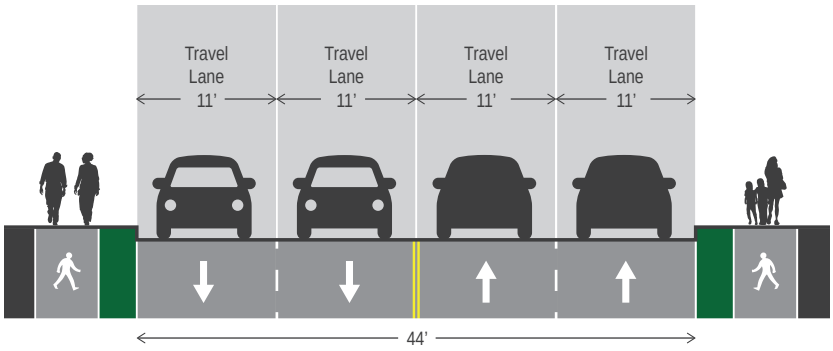
The road diet concept proposes reconfiguring the existing roadway from four travel lanes to two travel lanes, along with a two-way center turn lane. The remaining space could be allocated to bicycle lanes or striped shoulders. The figures below illustrate the current and potential cross sections, as well as the extent of the road diet. Road diets tend to facilitate lower operating speeds, and the implementation of the road diet should also investigate lowering the existing 40 mph speed limit. The roadway reconfiguration and reduced speed limit would improve safety and better support the local context and development patterns.

Based on the intersection analysis and typical queue lengths, turn lanes are required to provide adequate stacking capacity and maintain existing intersection performance. The intersection at Hamilton Street would maintain the existing configuration with a northbound left-turn lane extending approximately to Field Street. At NJ Route 27, the southbound left-turn lane should extend at least 150 feet in order to accommodate typical vehicle queues.

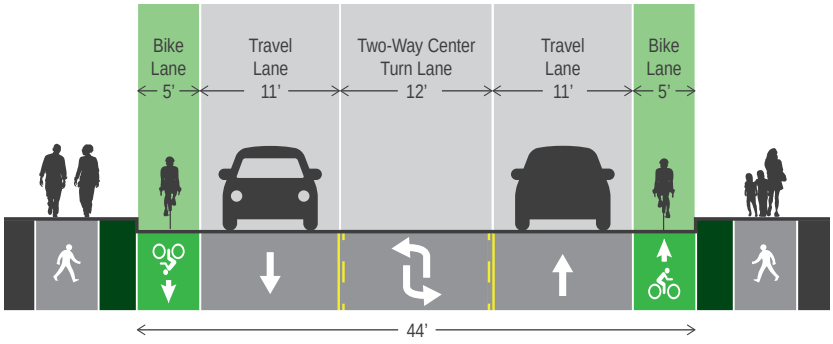
This concept provides an initial design alternative for further evaluation. The concept should be explored in greater detail with local, county, and NJDOT stakeholders.

Proposed Road Diet Extent

Existing Cross Section



Potential Road Diet Cross Section



Improvement	Order of Magnitude Cost (Est.)	Time Frame	Potential Partners
Hamilton Street / Renaissance Redevelopment PGIA			
Hamilton Street Corridor			
Install bus stop signage	Low	Short	County
Promote findings of the Strategic Zoning and Economic Development Recommendations Study	Low	Short	Town / County
Investigate shared-lane markings connecting to existing markings in New Brunswick	Low	Med	Town / County
Repair deteriorating and / or heaved sidewalk sections	Low	Med	Town / County
Widen sidewalk (min. 10 ft) in front of commercial properties	Low	Long	Town / Developer
Enhance pedestrian crossings with curb extensions and integrate green stormwater features into curb extensions	Low	Long	Town / County / Developer
Upgrade traffic signal equipment to include pedestrian signal heads and countdown timers	Low	Long	County
Install high-visibility crosswalks and ADA compliant curb ramps at unmarked crossings	Low	Long	County / Developer
Investigate opportunities to incorporate bicycle parking into streetscape and require bicycle parking for new developments	Low	Long	Town / County / Developer
Investigate opportunities to expand transit access along the corridor, such as NJ TRANSIT and/or Rutgers University bus service	Low	Long	County / NJ TRANSIT / Rutgers / Town
Lewis Street Bicycle Boulevard			
Install wayfinding signage and bicycle boulevard pavement markings	Low	Med	Town
Install a multi-use path between Francis Street and Berry Street	Low	Long	Town
Provide marked crossings and median islands on Franklin Boulevard	Low	Long	County / Town

Improvement	Order of Magnitude Cost (Est.)	Time Frame	Potential Partners
Install contraflow bicycle lane on Lewis Street between Franklin Boulevard and Norma Avenue	Low	Long	Town
Investigate opportunity to install bicycle boulevard behind the Nora Shopping Center	Low	Long	Town / Developer
Enhanced Multimodal Connectivity			
Adopt Complete Streets policy	Low	Short	Town
Investigate opportunities to enhance bike/ped connectivity between Franklin and New Brunswick with bike/ped-only, prefabricated structures crossing over Mile Run Creek	Low	Long	Towns
Provide bike/ped connections on Burns Street between Jurocko Avenue and North Lawrence Avenue and Winslow Avenue and Miller Avenue	Low	Long	Town
Provide bike/ped connection from Eugene Avenue and Victor Street to the rear and side, respectively, of the Hamilton Street Center shopping plaza	Low	Long	Town / Property Owner / Developer
Investigate opportunities to utilize the Mile Run Creek as a greenway	Low	Long	Town
Franklin Boulevard			
Investigate lowering the speed limit between NJ 27 and Lewis Avenue (currently 40 mph)	Low	Med	County / Town
Fill sidewalk gaps between Ellen Street and Frank Street, and between Fuller Street and NJ 27	Low	Long	Town
Investigate a road diet between Hamilton Street and NJ 27	Low	Long	County / Town / NJDOT

NOTE:

Order of Magnitude Cost tiers:
- Low: <$5M
- Medium: $5M - $25M
- High: >$25M

Time Frame tiers:
- Short: <3 year
- Med: 3-8 years
- Long: >8 years

Study Advisory Committee Members

Peter S. Palmer, Somerset County Board of Chosen Freeholders
Walter C. Lane, Somerset County Planning Division
Laurette Kratina, Somerset County Planning Division
Kenneth Wedeen, Somerset County Planning Division
Andras Holzmann, Somerset County Planning Division
Alicia Meyers, Somerset County Engineering Division
Adam Bloom, Somerset County Engineering Division
Michael Kerwin, Somerset County Business Partnership
John Maddocks, Somerset County Business Partnership
Donna Allison, RideWise TMA
Joseph Burdulia, New Jersey Department of Transportation
Barry Ableman, NJ Office for Planning Advocacy
Blythe Eaman, North Jersey Transportation Planning Authority
Douglas Greenfeld, North Jersey Transportation Planning Authority

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Board of Chosen Freeholders

Peter S. Palmer, Freeholder Director
Patrick Scaglione, Deputy Director
Patricia L. Walsh, Freeholder
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Brian D. Levine, Freeholder

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Matthew D. Loper, County Engineer/Board Secretary
William Ziegler, 1st Alternate
Mark Caliguire, Freeholder Alternate
Adam Slutsky, County Engineer Alternate
John M. Lore, Esq., Deputy County Counsel for Planning

Planning Division Staff

Walter C. Lane, PP/AICP, Director of Planning
Anthony V. McCracken PP/AICP, Assistant Planning Director
Laurette Kratina, PP/AICP, Chief of Strategic Planning
Thomas R. D'Amico, PP/AICP, Supervising Planner
Kenneth Wedeen, PP/AICP, Supervising Planner
Tara Kenyon, PP/AICP, Principal Planner
James Ruggieri, PP/AICP, Principal Community Planner
Andras Holzmann, PP/AICP, Senior Planner
Galina Chernikova, Senior Planner
Nora Fekete, Planner
Tanya Rohrbach, Planner
Andrew Phillips, Principal GIS Draftsperson
Melissa D. Harvey, Manager, Div. of Solid Waste
Patricia McGarry, Manager, Cultural and Heritage
Kaitlin Bundy, Program Coordinator, Cultural and Heritage
Cynthia Mellusi, Office Manager
Patrice Thomas, Administrative Assistant
Catherine Bunting, Administrative Assistant

Somerset County Planning Board
20 Grove Street, P.O. Box 3000
Somerville, NJ 08876-1262
(908) 231-7021 Fax (908) 707-1749
E-mail: planningbd@co.somerset.nj.us

wsp

PHILLIPS PREISS GRYGIEL LLC
Planning & Real Estate Consultants

Urbanomics

SUSAN G. BLICKSTEIN, AICP, PhD
PLANNING ♦ POLICY ♦ RESEARCH