

Supporting Priority Investment In
Somerset County
Phase II

July 2015



Disclaimer

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Technical Memoranda *(found on attached CD)*

Technical Memorandum 1 | Summary of Public Involvement Activities

Technical Memorandum 2 | Somerset County Market Study: Land Use and Vacancy

Technical Memorandum 3 | Methodology for Selection of Pilot PGIAs

Technical Memorandum 4 | Infrastructure Assessment of Selected PGIAs

Technical Memorandum 5 | Framework Plans



Executive Summary

Supporting Priority Investment in Somerset County Phase II is a collaborative and market-based assessment of opportunities for sustainable growth and redevelopment. The study builds upon a series of recent County- and NJTPA-sponsored studies and planning initiatives to prepare comprehensive land use and multimodal transportation strategies for priority growth investment areas.

Consistent with Somerset County’s long-standing commitment to coordination of local initiatives with state and regional goals, *Supporting Priority Investment in Somerset County Phase II* presents a comprehensive plan for strategic investments in the County’s 24 Priority Growth Investment Areas (PGIAs).

This report documents efforts to build consensus on achievable goals and objectives; select representative pilot study areas; conduct market-based assessment and screening of potential land use alternatives; and formulate framework plans of integrated land use and transportation strategies.

Study Findings

- Flat growth is projected for Somerset County households, population, and expected job creation through 2035.
- Somerset County office vacancy rates are among the highest in the region.
- Currently vacant office space will not be filled until 2035 based on projected job growth and space needs per employee.
- Market realities currently favor the development of market-rate, rental, senior, and workforce housing.

- Re-use and repositioning of vacant suburban office campus requires a long term investment of time and capital to achieve sustainable results.
- Supportive local zoning is seen as a driver of economic growth and redevelopment.
- Peak period traffic congestion is ongoing issue in many Somerset County PGIA's.
- Mixed-use scenarios with residential uses have been shown to be in high demand across the region and figure as an integral component of strategic investment opportunities.
- Somerset County needs to promote its assets and advantages including quality of life, parks and open space, schools, highly skilled labor force, and social services network.
- Improved street connectivity and multimodal interconnected street grids are essential to accommodate new trips and create walkable communities and sustainable main streets.
- Locate new jobs near multimodal transportation and affordable housing.

Key Themes

Supporting Priority Investment in Somerset County Phase II is a collaborative process to understand and address local needs, goals, and visions for future growth that supports redevelopment opportunities and encourages investment and job creation.

Data-driven methodologies were used to screen and evaluate the candidate PGIA's. A diverse cross section of representative place types and locations was selected for detailed study and evaluation. The market-based assessment provided a rigorous, data-driven appraisal of each PGIA, 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 PGIA. These plans are intended as guidelines for municipalities to inform future planning and development for the targeted areas.

A comprehensive implementation plan was recommended for each PGIA to address existing mobility and access deficiencies. 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.

Priority Growth Investment Areas

Somerset County’s Investment Framework identified 24 PGIA’s that present opportunities to support targeted growth and redevelopment opportunities. Input and guidance from the community-

based planning process was used to screen the initial candidates and select seven representative PGIA’s for detailed analysis and development of the framework plans.

Somerset County Priority Growth Investment Areas: Pilot Sites

PGIA	Municipality	Typology
RVCC/Easton Turnpike	Branchburg Township	Higher Education/Village Center
Chimney Rock Interchange	Bridgewater Township	Suburban Employment Node
I-287 Industrial Complex	Franklin Township	Mixed-Use/Industrial Center
Hillsborough Town Center	Hillsborough Township	Town Center
Manville Town Center	Manville Borough	Traditional Town Center
Mt. Bethel Employment Area	Warren Township	Suburban Employment Node
Watchung U.S. Route 22	Watchung Borough	Commercial/Retail Corridor

Framework Plans and Implementation Matrix

Detailed framework plans were developed to support implementation based on each PGIA’s unique blend of opportunities, assets, and constraints. Components of the plans include land use and placemaking elements, multimodal transportation and parking improvements, and institutional recommendations.

The framework plans ask - and begin the process of answering - the key questions

that will shape the future. The plans provide a roadmap on how to get there through regulatory and institutional changes and targeted investment in infrastructure.

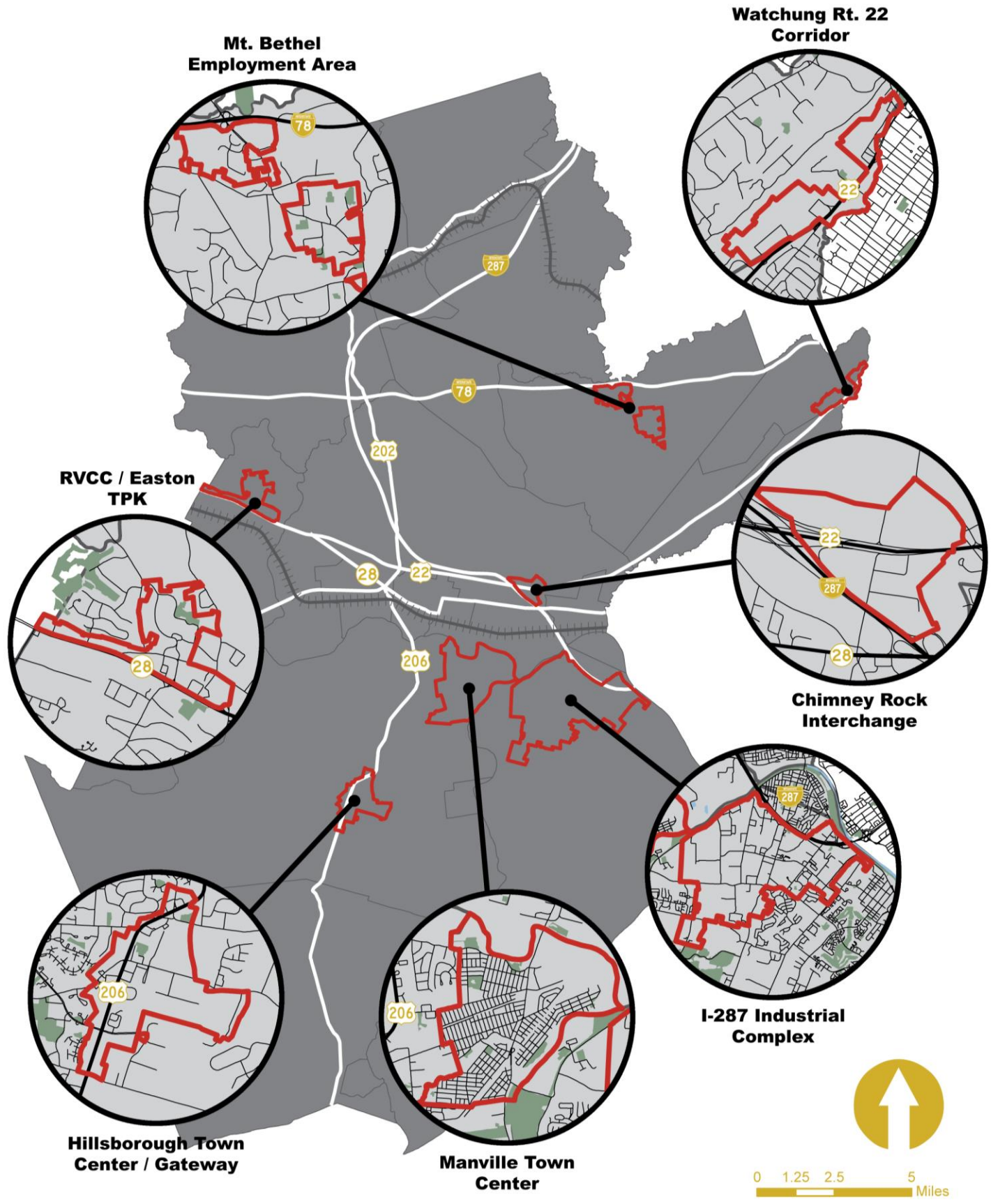
The implementation matrix details these recommendations, and indicates the time frame for implementation, the organization(s) responsible for the proposed improvement, and estimated order-of-magnitude cost.

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* studies to begin that process.

Selected PGIA Locations





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 makes it attractive for residents and businesses alike. The combination of rural heritage and economic opportunity have led to a high quality of life for residents, and Somerset ranks as one of the wealthiest counties in the nation. Moving forward, the County seeks to maintain this position through a strategic plan of action and investment.

Somerset County has long been recognized for its efforts to proactively address the region's key issues and challenges, including the need for redevelopment to create a sustainable economic base, and strategic investments in a safe, efficient, and accessible transportation system.

A series of recent studies and planning initiatives have been conducted to support and advance these goals:

- In 2010, the 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, advances integrated transportation and land use planning in support of redevelopment, economic growth, and

Quick Fact

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

improved mobility throughout Somerset County.

- In 2012, the County adopted the *Somerset County Investment Framework* and identified the 24 Priority Growth Investment Areas (PGIAs) where primary growth and investment are encouraged and best supported by infrastructure and utilities.
- The 2013 *Access and Mobility Improvements Study* built upon the Investment Framework and identified seven proposed locations for targeted growth and redevelopment, supported by planning, zoning, and policy instruments, 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 and private-sector investment, including high priority projects, initiatives, and strategic partnering opportunities.
- *Supporting Priority Investment in Somerset County Phase I*, completed in 2015, was an initiative that examined existing conditions, infrastructure, utilities, land use,

demographics, and natural resources for each of the 24 Priority Growth Investment Areas (PGIAs).

Supporting Priority Investment in Somerset County Phase II builds upon the process and methodologies established in the *Access and Mobility Improvements Study*, and leverages the essential data and resources from the *Supporting Priority Investment in Somerset County Phase I* capacity building initiative, to prepare comprehensive land use and transportation strategies for seven high priority candidates among Somerset County's twenty-four PGIAs.

Supporting Priority Investment in Somerset County Phase II develops a plan for strategic investments in the PGIAs, pairing public action and regulatory relief with private investment in housing, commercial, industrial, and retail space.

This Final Report documents coordination between the project team, Study Advisory Committee, Somerset County, stakeholders, and the public to build consensus on achievable goals and objectives, develop evaluation criteria and select high priority candidates, conduct market-based assessment and screening of potential land use alternatives, and formulate a framework plan of supportive land use and transportation recommendations for the seven selected PGIAs.

Supporting Priority Investment in Somerset County Phase II is a community-based planning process to develop framework plans for each PGIA. The study was undertaken in three parts:

Part I: Outreach and Data Assembly

- Coordination between focus groups, public officials and stakeholders was used to develop a comprehensive understanding of critical needs, priorities, and issues.
- Data resources were assembled to support PGIA screening criteria and conduct a market-based assessment tempered by current day financial and real estate conditions.

Part II: Screening and Assessment

- Data-driven screening methodologies were implemented to screen and prioritize the candidates.

- Study Advisory Committee and municipal partners participated in selection of seven high priority PGIA.
- Comprehensive multimodal transportation and environmental assessment was conducted.

Part III: Framework Plans

- Municipal coordination to identify and evaluate three alternative growth scenarios for each PGIA.
- Framework plans were created for each of the seven PGIA.
- Zoning, access, placemaking, and multimodal transportation improvement recommendations were developed to support implementation.
- Economic analysis estimated job creation, economic activity, and tax revenue benefits.
- Implementation matrix summarizes the recommended multimodal transportation improvements.



Cyclist in Bound Brook, NJ

1 | Public Outreach

*Public outreach plays an essential role in any planning study. To support the technical elements of the **Supporting Priority Investment in Somerset County Phase II** study, a community-based planning process was developed and implemented. The comprehensive program of outreach and coordination initiatives which helped guide the study effort and build consensus on a program of achievable goals and recommendations.*

The public outreach process took place throughout the course of the study and included numerous meetings, outreach elements, and opportunities for collaboration and coordination, including:

- Study advisory committee
- Focus groups
- Real estate industry and economic development professionals
- Municipal partners
- State and regional regulatory agencies
- Somerset County Planning Board
- General public and stakeholders

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. The SAC provided input and guidance throughout the study. Please see page 80 for the listing of SAC members.

Five meetings were held to guide the team from goal setting and screening of candidate PGIAs 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.

evaluate the 24 PGIAs, and select the highest priority candidates for detailed analysis and scenario testing.

Two Focus Groups were held with representatives from a broad spectrum of local and regional agencies, stakeholders, advocates, and social service providers.

Understanding these issues helped the project team to develop screening criteria,

Discussions topics included:

- What is the market demand for new development?
- What actions can be taken to provide regulatory relief to encourage private investment?
- Are newly created jobs accessible through the County’s multimodal transportation network?
- Is housing affordability a regional strength or weakness?
- What are the local barriers to mobility and labor force access and how can they be addressed?

Engagement of Real Estate Professionals

The key to the *Priority Investment* studies is advancing achievable and marketable development concepts for each of the PGIAs.

The project team held a series high-level, in-depth discussions with senior executives and decision makers among New Jersey’s leading real estate developers, brokers, and economic development organizations to better understand current market realities and financial considerations.

Firms and organizations that participated in the process included:

- Advance Realty
- AvalonBay
- CBRE
- Choose: New Jersey
- Jones Lang LaSalle (JLL) Real Estate
- NAIOP NJ

Municipal Meetings

Municipal elected officials, professionals, and planning board members were consulted at key stages of the study to ensure that each of the municipalities was given an equal voice. Local participation, support, and buy-in are essential

Through the discussions, the team developed an appreciation for how individual sites and properties are identified and evaluated, the present-day market demand for specific land uses and combinations of uses, and how real estate professionals are able to navigate New Jersey’s regulatory framework and the financial marketplace.

Key points that emerged from the discussions included:

- Need to understand location choice and product decision making
- Respond to emerging real estate trends and offerings
- Focus on Somerset County, including affordability
- Understand what actions Somerset County can take to facilitate and support new opportunities

elements to successful implementation of the overall plan.

Initial outreach meetings were held to introduce the study, seek input on goals, objectives, and screening criteria.

A series of meetings were held with each municipal partner to evaluate and screen the candidate PGIAs, discuss local vision and development needs, weigh proposed scenario alternatives, and ultimately achieve consensus on the framework

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 of 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*

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 open public meetings,

plans and implementation matrix. Feedback and comments were provided in person, via e-mail and telephone conversations, and through official memoranda.

Studies, as Somerset is the first New Jersey county to implement the state’s Criteria-Based Investment Framework to identify and advance redevelopment opportunities.

The project team convened a session with the OPA and partners state agencies on May 22, 2015 to review the PGIAs, discuss supportive regulatory assistance, and identify opportunities for partnering and funding.

Quick Fact

The high cost of housing in Somerset County is a significant concern for both young professionals just entering the job market and the low wage earners who play a vital role in the region’s economy.

which were held on April 20, 2015 and June 8, 2015.

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



Redevelopment in Bound Brook, NJ

- What is the role of government in regulation and oversight of private development?
- How does federal funding of transportation projects influence the independence of local decision making?
- How can private citizens have a greater voice and impact on how their communities are developed and governed?

Somerset County Development Opportunities: A Millennial Perspective

Somerset County Development Opportunities: A Millennial Perspective, a 2015 report from the Edward J. Bloustein School of Planning and Public Policy at Rutgers University, studied the market potential for Somerset County to attract “millennials.” The study found that millennials often prioritize the “three A’s”: Affordability, Amenities, and Access.”

With this in mind, the study recommended that in order to attract the millennial age group work force, Somerset County should develop attractive and affordable housing, enhance multimodal connections and direct rail access to Manhattan, and foster synergies between

health and medical institutions. This would enhance an already strong employment base in the county.

The study also evaluated area municipalities for their attractiveness based on accessibility, amenities, affordability, rental housing, and proportion of young people. The results indicate that although New Brunswick, (in Middlesex County), is the most attractive by this metric, Somerville ranked second highest because of the relative affordability of Somerville compared to New Jersey’s many small cities and urban areas.

In order to increase the attractiveness of Somerville and the County to millennials, the study recommends that the County

look to increase its scores in each of these categories.

What the Public Said

Comments received during the many outreach initiatives were as wide-ranging and varied as those who participated in the process. The project team and Study Advisory Committee used this input to develop the screening criteria, identify and select seven high priority PGIAs, evaluate alternative development scenarios, and prepare framework plans including land use and multimodal transportation options.

Comments include the following:

Economic Development

- Somerset County needs to promote its many assets and advantages including quality of life, parks and open space, schools, highly skilled labor force, and social services network.
- Regulatory relief is needed to attract and encourage new development and job creation to unleash the region's true economic potential.
- Office space in Somerset County is overbuilt with some significant long term vacancies.
- Absorption rates and future demand for office space are only a fraction of what is already available. Reuse of existing vacant spaces will be an ongoing challenge for the region.
- Many regional office and industrial areas have vacancy issues and will continue to be an issue in the future; the demise of office complexes impacts many low wage jobs.

Key Comment

Somerset County needs to promote its many assets and advantages to attract new development and promote job creation.

Housing

- Much of the new residential development is not affordable and does not match the needs of the growing low skill and low wage local job market.
- The region's housing stock often is disconnected from medical services, social/government services, retail, etc.
- Multigenerational housing and mixing of ethnicities, incomes, generations, and age groups helps create vibrant and sustainable communities.
- Zoning to allow reconfiguring homes for extended- and multifamily use.
- Address care givers' transportation and housing needs to support aging in place.
- Somerset County is a key player whose support is needed to advance these initiatives.

Transportation

- Somerset needs to develop more flexible transit options, to solve first/last mile connection issues, particularly to/from rail stations.



- Shuttle and jitney funding is often temporary or short term; financial sustainability is an ongoing issue. Shuttles are also expensive, and there is a need to develop more flexible and cost effective options.
- RideWise TMA is expanding their target market segment beyond just employers to include seniors, students, and others with limited mobility.
- Implement flexible zoning for parking requirements and shift funding to multimodal and transit enhancements.
- U.S. Route 206 recurring congestion is a long-standing regional constraint.
- Somerville transit station is becoming a regional hub. Need to look at how to improve linkages to/from the station.
- Rail transit options are limited and primarily focused on serving the Newark and New York City markets. Somerset needs better connections to the region’s growing small urban centers including Morristown, New Brunswick, and Princeton.

- County and municipalities need to clearly establish who is responsible for building and maintaining the sidewalk network, and determine how to fund projects that improve walkability and connections to transit.

Land Use

- A disconnect exists between land use decision making and transportation needs. Transportation is often an afterthought for developers. A development model is required to focus attention on the big picture, beyond just what fits on a parcel.
- There is a growing need to locate new and lower wage jobs near multimodal transportation and affordable housing.

Education

- A split model for RVCC should be considered based on targeted market segment: provide skills and ESL training in urban areas; provide advanced degree training and college preparation in suburban locations.

2 | Data Assembly

The overall Supporting Priority Investment in Somerset County initiative is a multi-phase process. Phase I was a critical step in advancing the Somerset County Investment Framework, and completed in April 2015. The study compiled background data and analyzed existing conditions for all 24 PGIAs. The data and findings of Phase I laid the groundwork and provided many of the data resources for the Phase II study. Phase II uses these data to identify opportunities for targeted growth and redevelopment and develop framework plans for the seven selected PGIAs, which represent a cross-section of place types. A future Phase III study will examine the remaining 17 PGIAs.

Methodology

Phase I included a comprehensive analysis of demographics, land use, utilities, and infrastructure for each PGIA. Major outputs and work elements included:

- Inventory of existing industries and businesses
- Baseline demographic, socio-economic, and development characteristics
- Assessment of land use policies and regulations
- Evaluation of labor force and real estate market demand
- Identification of infrastructure and utility issues including electrical capacity, and sewer and waters service
- Improvement to land value (ILV) analysis
- Identification of employment growth opportunities
- Identification of workforce housing opportunities
- Baseline buildout analysis

Phase I Findings

Commercial Vacancies – As of 2013, the vacancy rate for office space within Somerset County was 26.6%, nearly 7% higher than the surrounding metro area. The rate is forecast to decrease to 20% by 2017, suggesting continued weak demand. Much of the county’s existing office stock is characterized by large, isolated, single-tenant corporate campuses. Vacancies at these sites can negatively impact economic activity and property values of

surrounding commercial properties. Vacant office campuses should be targeted for redevelopment and repurposed to alternative uses.

A large portion of the retail center space within the PGIAs is also likely to become physically and/or economically obsolete over the next five to ten years. This space should also be prioritized for

redevelopment and repurposing opportunities.

Housing Affordability – Ensuring adequate workforce housing for low and moderate income workers should be an economic priority for Somerset County. Despite flat and weak population growth projections in Somerset County, 25,000 to 33,000 new housing units will be built within the County by 2028, largely due to pent-up worker demand.

Municipal Zoning – Many of the PGIAs could benefit from greater concentrations of housing and/or non-residential uses. Local land use policies and zoning that allow mixed-use, increased density, and redevelopment areas, where appropriate, are important tools for encouraging economic growth, redevelopment, and the reuse of underutilized properties.

Transportation – Peak period traffic congestion is an issue in many PGIAs and a potential constraint to growth. The projected growth of the service industry, which principally relies upon a lower wage workforce, will increase the need for public transit options and improved pedestrian access. Pedestrian-oriented mixed-used redevelopment strategies, with workforce housing in close proximity to jobs, would allow multimodal commute options, alleviate congestion, support public transit enhancements, and attract workers and jobs.

Supporting Business and Industry – Small and young businesses are major

Key Comment

Innovative strategies for reuse and repositioning of commercial vacancies present a long-term challenge for Somerset County and much of New Jersey.

components of the County’s economy. The commercial and industrial land within the County’s PGIAs is comprised largely of small businesses (74%; fewer than 20 employees). Young (5 years or less) and start-up (2 years or less) businesses compose 32% and 15%, respectively, of the businesses within the PGIAs.

Future Growth and Development – A full buildout of all the PGIAs would support significant growth, including approximately 19,000 new residential units and 25 million square feet of retail space. Additional growth could be accommodated by filling vacancies in existing commercial buildings.

Household and population growth is projected to remain flat in the near future. However, growth is expected to be strongest in non-family households and among older adults (ages 55-74), both of which suggest greater demand for smaller rental units with access to amenities, jobs, and entertainment. Demand for senior housing is also expected to be high. Conversely, the number of residents aged 25-54 is expected to decline, which may result in labor shortfalls.

Implications for Phase II

The key findings and data compiled in Phase I were integrated into the Phase II Study process and provided vital inputs throughout the course of the study.

Phase I findings were used to support:

PGIA Screening – Phase I was a primary data source for the screening process to identify priority PGIA for more detailed analysis in Phase II. Data on land use, zoning, vacancies, ILV analysis, and workforce housing opportunities, for example, were incorporated into the screening methodology.

Infrastructure Analysis – The Phase I summary of existing transportation and utility systems at each PGIA provided the background for the more detailed analysis conducted in Phase II.

Redevelopment Scenarios & Framework Plans – Phase I included an evaluation of vacancy rates within the PGIA and County-wide. The data indicate market trends that helped inform the development of the Phase II land use scenarios.

Zoning and Workforce Housing – Phase I also identified opportunities for workforce housing and recommendations for adjustments to local zoning codes. For the purposes of the study, workforce housing is defined as housing affordable to households that meet the income eligibility requirements for low- and moderate-income units created pursuant to the New Jersey Fair Housing Act, as well as housing affordable to households earning between 80 and 120 percent of median household income. A consistent finding relative to Somerset County is the high cost of housing and limited affordability among the low-skilled and low-wage earners that form an essential core of the labor market. Phase I identified key locations within that could be targeted for improvements in housing access and affordability through changes in allowable Floor Area Ratio (FAR) and Dwelling Unit density. Table 1 below summarizes these specific opportunities for regulatory changes in the PGIA framework plans.

Table 1: Phase I PGIA Findings

PGIA	FAR/DU Density Recommendation	Workforce Housing
RVCC/Easton Turnpike	Increase	133 suitable acres
Chimney Rock Interchange	Increase	67 suitable acres
I-287 Industrial Complex	Increase	346 suitable acres
Hillsborough Town Center	Increase	36 suitable acres
Manville Town Center	Increase	No opportunities
Mt. Bethel Employment Area	Keep the same	61 suitable acres
Watchung Route 22	Increase	No opportunities

3 | Screening and Selection of PGIAs

Somerset County’s Investment Framework identified 24 Priority Growth Investment Areas that present opportunities to support targeted growth and redevelopment and encourage private investment and job creation. Supporting Priority Investment in Somerset County Phase II screened the 24 initial candidates and selected seven PGIAs for detailed analysis, which represent a cross-section of PGIA place types within the County. Input and guidance from the team’s community-based planning process helped guide development and implementation of the screening process.

Methodology

A variety of alternative scoring and evaluation methods were considered and examined including several from previous Somerset County studies, the draft New Jersey State Strategic Plan, and various smart growth evaluation metrics and planning resources.

Criteria and factors already used to develop and select the 24 PGIAs were not duplicated; rather than mimic previous procedures and methodologies the process was instead designed to enhance and augment the screening process through detailed, data-driven assessment.

Through this process the team identified candidate screening criteria. They were grouped into five categories that indicate development and redevelopment opportunities, assets and constraints, and whether there is local support.

Each of the five categories is also reflective of the study goals:

- **Access to local and regional multimodal transportation** – evaluates the level of effort required to enhance

multimodal access; freight and goods movement facilities.

- **Land Use, Zoning, and Baseline Conditions** – considers potential for redevelopment and constraints such as risk of flood hazard.
- **Development Potential** – seeks to identify underutilized and underperforming locations.
- **Population, Housing, and Density** – examines opportunities for workforce housing and appropriate densities.
- **Business Development** – considers whether desirable amenities are easily accessible.

The screening methodology utilized quantitative data wherever possible, including GIS analytics, findings from the Phase I capacity building study, and various web-based resources. The project team met with County staff to review the methodologies and data elements and also assigned weights of high, medium, or low to reflect the relative level of importance of each criterion. The selection criteria are shown in Table 2.

Table 2: Final Screening Criteria

#	Access to Multimodal Transportation Facilities	Source	Weight
1	Is the PGIA near a train station?	GIS analysis	High
2	Is the PGIA served by regional bus service?	GIS analysis	High
3	How much effort is required for enhanced pedestrian access at the PGIA?	Qualitative	Med
4	How much effort is required for enhanced bicycle access at the PGIA?	Qualitative	Med
5	How much effort is required for enhanced vehicular access at the PGIA?	Qualitative	Med
6	Is the PGIA within 2 miles of an interstate interchange?	GIS analysis	Low
7	Is the PGIA adjacent or in close proximity to a freight rail?	GIS analysis	High
8	Is PGIA proximate to truck network?	GIS analysis	Med
9	What is the PGIA's proximity to NYC by car?	Google travel time	Low
10	What is the PGIA's proximity to NYC by train?	Google travel time	Low
Land Use, Zoning, and Baseline Conditions			
11	Is the PGIA in a municipal redevelopment area?	Phase I / GIS analysis	High
12	Does the PGIA have opportunities for mixed-use?	Qualitative	Low
13	Does the PGIA have a high vacancy rate?	Phase I / GIS analysis	Med
14	Is PGIA in documented flood zone?	GIS analysis	Med
15	Does the PGIA provide/enhance access to existing public open space?	GIS analysis	Med
Development Potential and Improvement to Land Value (ILV)			
16	Does the PGIA have any low ILV parcels?	Phase I / GIS analysis	High
17	Any planned/approved redevelopment within the PGIA?	Phase I / GIS analysis	Med
18	Is there vacant land suitable for redevelopment?	Phase I / GIS analysis	High
Population, Housing, Density			
19	Is the PGIA proximate to affordable or workforce housing?	Phase I / GIS analysis	Med
20	Does the PGIA have a high number of DU/acre?	Phase I / GIS analysis	Med
21	Does the PGIA have a population density higher than County average?	US Census	Med
22	Does the PGIA have a high land use intensity (population plus jobs per acre)?	Phase I / GIS analysis	Med
Business Development			
23	Is the PGIA proximate to a higher education institution?	GIS analysis	Med
24	Access to amenities?	Walk Score	High



Hillsborough PGIA

Selection of PGIAs

After the quantitative assessment scoring process, the project team examined the candidate PGIAs and divided them into five typologies to ensure a diversity of communities, areas types, land uses, and employment opportunities were represented:

- **Employment node:** PGIAs anchored by businesses with a large number of employees, such as such as corporate office campuses
- **Professional Office/Commercial Corridor:** PGIAs with clusters of small professional offices, professional services, or retail commercial
- **Town Center:** PGIAs located within traditional existing town or village centers
- **Industrial:** PGIAs composed predominantly of industrial-zoned land
- **Higher education:** PGIAs that include institutions of higher education

Additional considerations included geographic diversity and strong local

support and interest by the host municipalities in participating in the study. Table 3 shows the seven PGIAs divided by typology. This grouping demonstrates a distribution among typologies and locations.

The geographical distribution of the PGIAs can be found in Figure 1 on Page 17.

- **RVCC/Easton Turnpike:** Located along U.S. Route 22 in Branchburg, the area is predominantly developed with commercial uses focused to the south of the Raritan Valley Community College campus.
- **Chimney Rock Interchange:** Located around the interchange of the U.S. Route 22 and Chimney Rock Road in Bridgewater, the PGIA is relatively compact and self-contained due to I-287 to the south/west, the quarry to the north, and natural features to the east.
- **I-287 Industrial Complex:** Covering approximately 2,900 acres in

northwestern Franklin, the PGIA has access to I-287 and New Brunswick, and currently consists largely of low density warehouse, office, and light industrial uses.

- **Hillsborough Town Center:** Situated at a major crossroads within the County (U.S. Route 206 at County Road 514), Hillsborough has developed a vision and is seeking to advance plans for a mixed-use town center.
- **Manville Town Center:** Though the PGIA includes the entire Borough of Manville, the focal point is the former Rustic Mall site, a key redevelopment

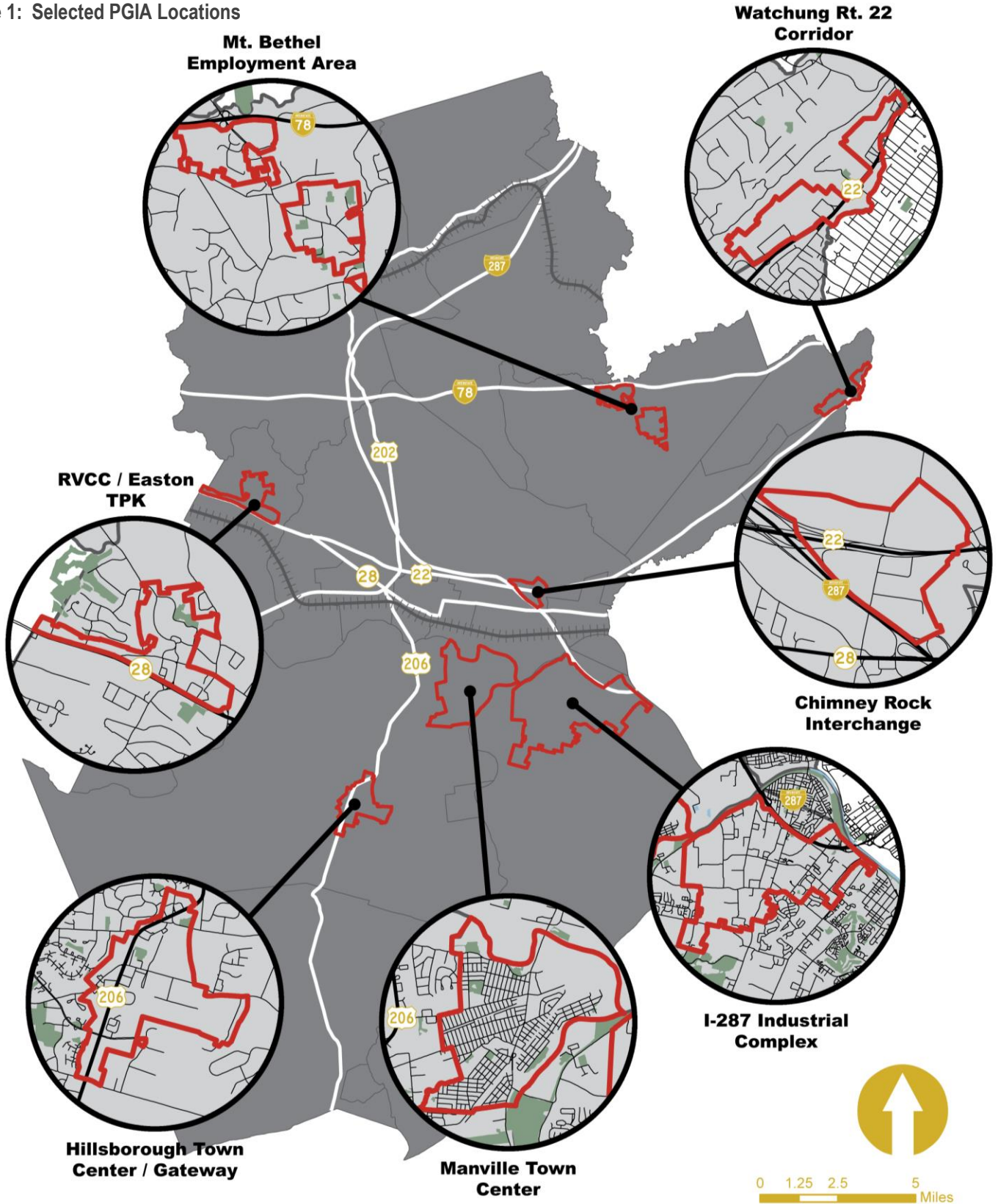
parcel within Manville’s commercial core.

- **Mt. Bethel Employment Area:** Located in Warren, the PGIA has access to I-78 and consists of three distinct nodes characterized predominantly by office uses.
- **Watchung Route 22:** A narrow corridor in Watchung, the PGIA includes 259 acres of primarily commercial property along both the north and south sides of U.S. Route 22.

Table 3: Selected PGIAs

PGIA	Municipality	Typology
RVCC/Easton Turnpike	Branchburg Township	Higher Education/Village Center
Chimney Rock Interchange	Bridgewater Township	Suburban Employment Node
I-287 Industrial Complex	Franklin Township	Mixed-Use/Industrial Center
Hillsborough Town Center	Hillsborough Township	Town Center
Manville Town Center	Manville Borough	Traditional Town Center
Mt. Bethel Employment Area	Warren Township	Suburban Employment Node
Watchung U.S. Route 22	Watchung Borough	Commercial/Retail Corridor

Figure 1: Selected PGIA Locations



4 | Market-Based Assessment

The market assessment provides an overview of land uses and vacancy rates for Somerset County. Market-based methodologies provide a rigorous, data-driven assessment of each PGIA, comparing land use, vacancy rates, and market trends to identify opportunities for targeted development and redevelopment in Somerset County. These methodologies quantify key Somerset data points and compare them to both the neighboring counties and the region as a whole.

The assessment also provides comparison with neighboring Hunterdon, Mercer, Middlesex, Morris, and Union counties in order to inform the development of viable and sustainable land use scenarios and framework plans for each PGIA.

Methodology and Assessment

- The market assessment quantifies the current state of development, land use, employment, and housing in Somerset County, explores market demand for new development by use, type and size, and identifies future potential for market absorption of new, currently vacant, and underutilized properties. Each county's data were summarized individually, followed by a comparative analysis of Somerset's individual strengths and weaknesses both internally and relative to its neighbors.
- Detailed data on parcels, structures, and structure vacancies were derived from the CoStar database acquired from NJTPA. These data include extensive detail on current and previous property listings. Census demographic data, employment projections, and projections for market absorption of key land use sectors were also utilized.
- In addition to totals by land use category and vacancy rates, the various land use categories were also evaluated on a per capita basis.
- This assessment includes evaluation of the principal land use categories: farm, residential, commercial, retail, industrial, warehousing, mixed-use, and restaurant.
- Almost one fifth of Somerset County maintains a rural character, with some 843 non-working and 416 working farm properties. Primarily located along the western side of the

Key Comment

Based on projected job growth rates and needed office space per employee, currently vacant office space will not be completely filled until 2035.



county, farmland covers almost 35,000 total acres.

- More than 35% of total land area in Somerset County is taken up by residential properties with an average size of 0.69 acres. Both significantly exceed the regional average; only Union has a larger share of residential land (45.9%) and only Hunterdon has a larger average parcel size at 1.8 acres. Multifamily properties make up a relatively small share of the overall residential stock across the region.
- Office and Retail space in Somerset comprise 28.5 and 17.5 million square feet, respectively. Vacancy rates for both are among the highest in the region. Employment growth, the primary driver of office space needs is projected at 28.3% for Somerset County from 2010-2035, lower than all the neighboring counties except Union. However only a small share of this employment growth is in office-related industries. Based on projected job growth rates and needed office space per employee, currently vacant office space will not be completely filled until 2035. Finding new uses for the excess vacant stock must be considered as a viable option.
- Warehousing and industrial uses are typical shaped by the regional transportation network. In Somerset County, this includes Interstates 78 and 287; U.S. Routes 22, 202, and 206; and NJ Route 28. Unlike Middlesex and other counties whose proximity to the New Jersey Turnpike provides access to large scale warehousing and distribution facilities, warehousing and light industrial space in Somerset are much smaller and targeted to specialized facilities and industry segments.
- Not surprisingly, the regional warehousing market is dominated by Middlesex County, but Somerset has successfully marketed its space and has a comparatively low vacancy rate at 6.4%. Warehousing is 23.6% of total rentable building area in Somerset, second highest among the county's principal land use categories.
- Manufacturing is a small but important component of the Somerset



West Trenton Line Rail Alignment in Manville, NJ

- County economy, accounting for 10.4% of total rentable building area in the county, which is comparable to the surrounding counties.
- Previous studies, including the *Making Connections Plan*, have identified these issues and the role of the transportation network in shaping Somerset's small but vital warehousing and light industry market segment.
 - Although mixed-use and restaurants account for the smallest share of overall rentable building area in Somerset County, they have the lowest vacancy rates among all of the major land use categories. Within Somerset and regionally, restaurant vacancy rates are second lowest only to mixed-use, indicating potential for additional demand in both categories.
 - These patterns are repeated across the region, setting the groundwork for new a development paradigm, one that blends complementary uses with a focus on placemaking rather than just adding distinct, individual buildings to the existing stock with the expectation that market demand will continue to absorb new product as had been the case in prior decades.
 - Retail and restaurants are now frequently viewed as amenities in new development built as sustainable, self-supporting communities, creating patterns that can be replicated in ways that support and enhance the local and regional context.

5 | Infrastructure Assessment

The infrastructure assessment provides an analysis of the transportation and infrastructure systems servicing each of the PGIAs. The assessment includes a multimodal transportation analysis, review of access to major utilities, and a preliminary environmental screening. Key assets were identified at each PGIA, 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 PGIA, which in turn drove the framework plans and improvement recommendations.

Methodology and Assessment

Roadway and Vehicular Access

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

Traffic Capacity Analysis

The traffic capacity analysis provides information on current traffic operations within the PGIA. 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. The project team used existing traffic data and Synchro models available from the County to evaluate major intersections within the PGIAs. Traffic data for each location was adjusted to a 2015 existing base year using NJDOT access management growth projection methodologies. Each PGIA was

analyzed using the approved NJTPA 2015 existing year Transportation Improvement Program (TIP) project list.

Crash History

A review of crash history data provides an insight into potential safety issues along the roadway network. The project team evaluated crash data provided by Somerset County for the most recent three-year period, 2011-2013. Data was evaluated for each PGIA as a whole, as well as along the major roadways within the PGIAs (state and county roadways). Crashes were mapped to identify clusters, hot spots, and contributing factors. Key crash characteristics were tabulated and over-representations noted along each corridor. For state roadways, data on crash rates were also obtained and compared to statewide averages.

NJDOT Management Systems Data

The project team obtained NJDOT management systems data for congestion, pavement and drainage along state highways within each of the PGIAs. The

data was tabulated to identify known issues or problem areas within the PGIA. Congestion Management System data identify areas with recurring congestion, indicating where the roadway system is already at capacity and cannot accommodate future growth without accompanying transportation improvements. Pavement Management Systems data identify roadway segments with deficient roadway surface conditions, which suggest a need for spot maintenance or corridor resurfacing. Drainage Management System data identify roadway segments that have recurring drainage issues. These locations may have frequent roadway flooding that could negatively impact traffic circulation and require significant roadway or grading improvements.

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 PGIA was documented in the *Supporting Priority Investment in Somerset County Phase I* study, including NJ TRANSIT bus and rail service, and Somerset County bus service, as well as access to local bus and rail stations. The project team utilized this information to evaluate transit services and accessibility for each PGIA.

Pedestrian Access

Better-connected street networks offer more options for pedestrians to reach more places in shorter distances, increasing the convenience of walking, and providing greater opportunities for multimodal travel. The PGIA 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. These measures do not take into account qualitative measures of walkability, (e.g., quality of the walking environment, character of land uses, etc.) nor do they take into account quantitative measures such as the existence (or not) of sidewalks. The project team used recent aerial photography to map the existing sidewalk network along primary roadways within each PGIA.

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 while that 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 PGIA was analyzed from the perspective of traffic stress along the primary roadways in the vicinity of each the PGIA. 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 PGIA was documented in the *Supporting Priority Investment in Somerset County Phase I* study. The project team utilized this information to summarize existing utility infrastructure at each PGIA.

Environmental Constraints

Environmental issues can preclude or significantly increase the costs of redevelopment opportunities. To identify potential redevelopment 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)), and wetlands.

More detail on the infrastructure assessment can be found in the appendix in Technical Memorandum 4.

6 | PGIA Framework Plans

Supporting Priority Investment in Somerset County Phase II is a community-based planning process to develop framework plans for each of the seven high priority PGIAs. 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 studies to begin that process.

Methodology

The community-based planning process begins with gathering input, guidance, and direction from the diverse assembly of stakeholders and establish goals, objectives, and community vision for each of the seven PGIAs. This input was filtered through the data resources assembled to support the study including the capacity building initiative, market-based assessment, and infrastructure, traffic, 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 seven PGIAs and their host municipalities.

The resulting framework plans include a program of land use recommendations, placemaking elements, multimodal transportation and parking, and institutional recommendations to advance and achieve implementation based on each PGIA's unique blend of assets, opportunities, and constraints.

The framework plans are not a final destination described through detailed site plans and zoning ordinances, but rather a starting point for each town to begin the process of creating a sustainable and livable economic future. Each plan represents a unique blend of land use, transportation, and institutional recommendations to achieve these ends. And each asks, and begins the process of answering, the key questions that will shape the future and how to get there through regulatory changes, targeted investment in infrastructure, and institutional change.

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* studies to begin that process.

Key Themes

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

- *Supporting Priority Investment in Somerset County Phase II* is a **collaborative process** to understand and address local needs, goals, and vision, and to support targeted growth and redevelopment opportunities and encourage private investment and job creation.
- **Data-driven methodologies** were undertaken to screen and evaluate the candidate Priority Growth Investment Areas (PGIAs). A diverse cross section of seven representative place types and locations was selected for detailed study and assessment.
- **Market-based assessment** provides a rigorous, data-driven appraisal of each PGIA, comparing land use indicators and market trends to identify viable opportunities. **Mixed-use scenarios** with market rate rental apartments have been shown to be in high demand across the region and figure as an integral component of strategic investment opportunities.
- Framework plans of integrated land use, transportation, and placemaking strategies were developed for each PGIA. 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.
- A comprehensive implementation plan of **multimodal transportation and parking improvements** was recommended for each PGIA 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** – including regulatory relief, density bonuses, and assistance from local, county, regional and state agency partners – will foster implementation and encourage private investment to implement the framework plans.



Existing shopping center within the RVCC/Easton Turnpike PGIA.



Typical style of historic housing stock within the North Branch hamlet, located just east of the RVCC/Easton Turnpike PGIA along CR 614 (Easton Turnpike).

Entrance to RVCC, at the intersection of RVCC Drive and CR 614 (Easton Turnpike).





Description

Location / Branchburg Township, NJ

Acreage / Approx. 471

Existing Uses

Raritan Valley Community College campus, medical and professional office, retail, mobile home park

Current Zoning

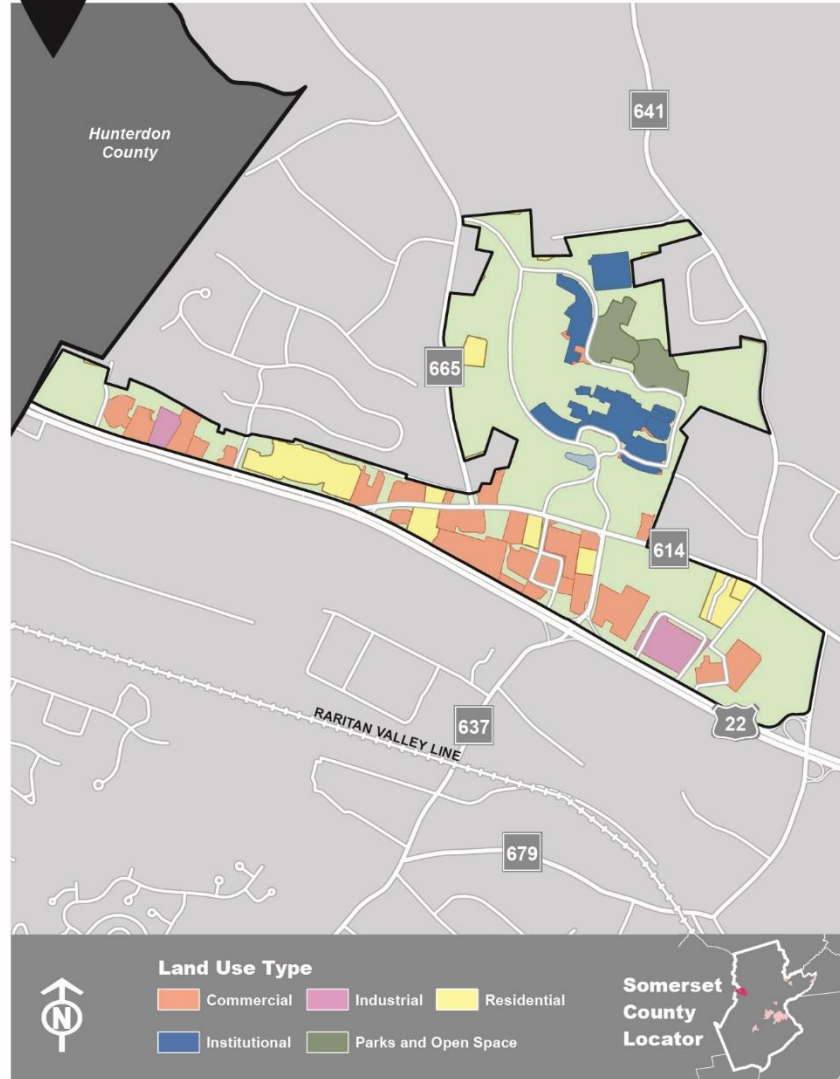
CF Community Facilities, O Office, R/S-1 Retail Service, MH Mobile Home, I-2 Industrial

PGIA Summary

The area is predominantly developed at a moderate density with commercial uses generally focused in a node on the south side of Easton Turnpike opposite Raritan Valley Community College. The college itself is somewhat isolated from surrounding uses, and there are a number of vacant and “soft” sites in this area.

The focus area is the U.S. Route 22 and Easton Turnpike corridor (excludes the college’s property), ending at the existing multifamily development to the west of U.S. Route 22/Easton Turnpike intersection. An enhanced local street grid and improved linkages between RVCC and the focus area will be explored in each scenario.

PGIA Map



Multi-Modal Access Metrics

NJ TRANSIT Access



LIMITED NJ TRANSIT RAIL SERVICE

Network Walking Reach



SLIGHTLY WALKABLE

Access Summary

Multi-modal access metrics indicate an auto-centric environment. The southeastern quadrant of the PGIA is within one-mile of the North Branch train station. The PGIA is ‘slightly walkable’ due to limited roadway connectivity and a significant number of sidewalk gaps along the existing roadway network. The limited connectivity also contributes to few route options for vehicles, higher traffic volumes, and a challenging environment for bicyclists. A detailed analysis of the transportation infrastructure can be found in Technical Memorandum 4.

Strength

S

- Direct access to the regional highway network via U.S. Route 22
- Higher education facility (RVCC) is a regional asset and destination, which attracts a large, consistent base of students, employees, and area residents and presents a potential market for complimentary amenities and development options
- PGIA is adjacent to the historic North Branch village and its scenic rural street scape, in contrast to the highway-oriented U.S. Route 22 corridor

Weakness

W

- Auto-centric roadway design
- Limited street network and connectivity
- U.S. Route 22 crash rate exceeds state average
- Crash hot spots at 3 principal intersections
- Minimal existing pedestrian infrastructure
- Stressful environment for cycling and walking
- Transit access limited to Somerset County CAT
- Divided highway design of U.S. Route 22 limits left-turn opportunities
- High-speed intersection design of U.S. Route 22 at RVCC Drive is inconsistent with the local North Branch village context

Opportunity

O

- High office space vacancy
- Favorable ILV ratio indicates redevelopment potential with a significant percentage of vacant developable land
- North Branch Station on NJ TRANSIT Raritan Valley Line is within 1 mile
- Favorable lot spacing for improved street network
- Existing uses of several parcels within the PGIA present opportunities for redevelopment in a manner consistent with the North Branch village center concept

Constraint

C

- Contains 2 contaminated sites
- Several streams and associated wetlands traverse the northern portion of the PGIA
- PGIA is bounded by U.S. Route 22, a high-speed, divided highway with few intersections
- Current design of U.S. Route 22 and its intersections are not compatible with a Village Center concept

Scenario 1:

Existing Zoning Buildout

The existing buildout scenario assumes various soft sites along the Route 22 and Easton Turnpike corridors would redevelop in accordance with the current zoning, which is primarily commercial in nature and permits offices, retail services, hotels and large-parcel light industrial uses in specific zones. This permitted mix of uses is consistent with what currently exists along the corridor.

- 300,000 sf office space
- 250,000 sf lab/research
- 350-400,000 sf warehouse
- 150,000 sf retail
- 300-350 hotel rooms with conf. center and structured parking
- Site FAR approx. 0.35; 45-50% impervious

Scenario 2:

North Branch Hamlet Expansion

This scenario proposes additional commercial development generally centered at the intersection of RVCC Drive and Easton Turnpike. These commercial uses may include retail, services, restaurants, offices, and/or a boutique hotel, and considers the redevelopment of existing industrial sites. A new internal circulation spine roadway running parallel between Route 22 and Easton Turnpike would be the focal point for new development. The eastern end of the targeted area would be developed as a traditional village center, in the form of an expansion of the existing North Branch hamlet and should follow a similar development pattern, style, and scale.

- New mixed-use village center with 60-70 dwelling units (generally single-family detached or attached) modeled after existing development in North Branch and up to 12,000 sf retail and/or office, with some upper-floor residential units
- New boutique hotel/inn with 40-50 rooms
- Additional 200,000 sf retail at western portion of PGIA focus area
- Overall developed site impervious coverage 25%
- Overall hamlet FAR approx. 0.15
- Overall developed site FAR approx. 0.20-0.25

Scenario 3:

North Branch Hamlet Expansion + College Commons

Scenario 3 would enhance the North Branch hamlet expansion developed in Scenario 2 include a boutique hotel. This scenario provides the opportunity to add some additional development including a mix of commercial and upper floor residential uses. The amount of development would depend on the size of the properties to be redeveloped. The goal would be to leverage the proximity to the Raritan Valley Community College campus and existing and new commercial development in the area. Connections between existing and proposed development and the campus would be promoted. The proposed internal spine roadway in Scenario 2 and new north/south connections would enhance connectivity and help address existing traffic issues. The expansion area for North Branch at the eastern end would serve as a transition zone between the existing hamlet and new development to the west.

Multimodal Transportation Improvements

Transportation improvement concepts for the RVCC/Easton Turnpike center around the focal area between U.S. Route 22 and the Easton Turnpike, seeking to create a walkable village center with connectivity to the RVCC campus and key nearby destinations and amenities.

An expanded street grid system is proposed, creating smaller blocks and a more interconnected, pedestrian scale street network. A new east/west street becomes the *Main Street* of the village center and provides an alternative, parallel route to the predominant U.S. Route 22 and the Easton Turnpike. New development is oriented towards the street with shared rear parking.

Additional north/south links improve connectivity, and a roundabout at RVCC Drive would accommodate turning movements, calm travel speeds, and support local traffic flow to a degree consistent with the village center concept.

A complete sidewalk network and enhanced crossings enhance pedestrian access and mobility. Filling sidewalk gaps

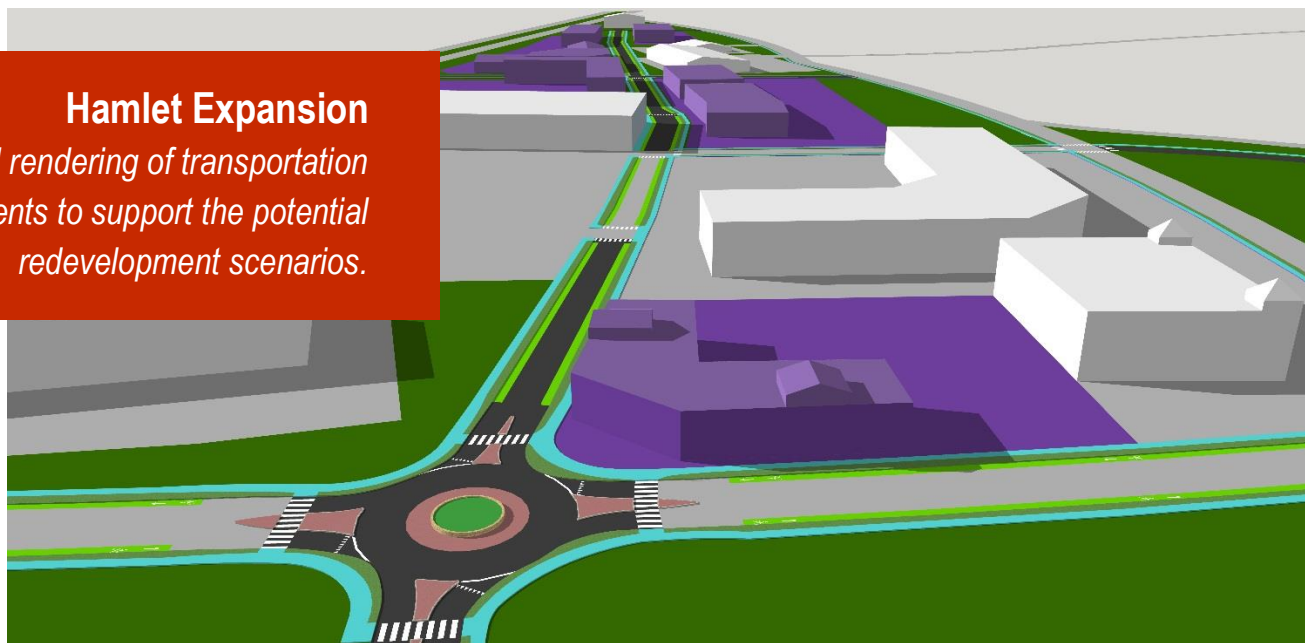
along Easton Turnpike (CR 614) through the PGIA and to the east provides pedestrian access to the North Branch hamlet. CR 614 and CR 637 may be restriped with bike lanes within the existing cartway width, providing accommodations for cyclists, and linking the PGIA with residential neighborhoods to the east and south.

In collaboration with RVCC, a multi-use trail is recommended to better link the RVCC campus to commercial activity and residences within the focal area and encourage access to the campus by foot or bike. In coordination with RVCC and developers, the potential for a new shuttle service should also be explored to address the “last mile” connection between the RVCC campus, new residential and commercial development within the PGIA, and the North Branch rail station.

Roadway and streetscape design should follow the best practices for Complete Streets, such as the NACTO Urban Street Design Guide.

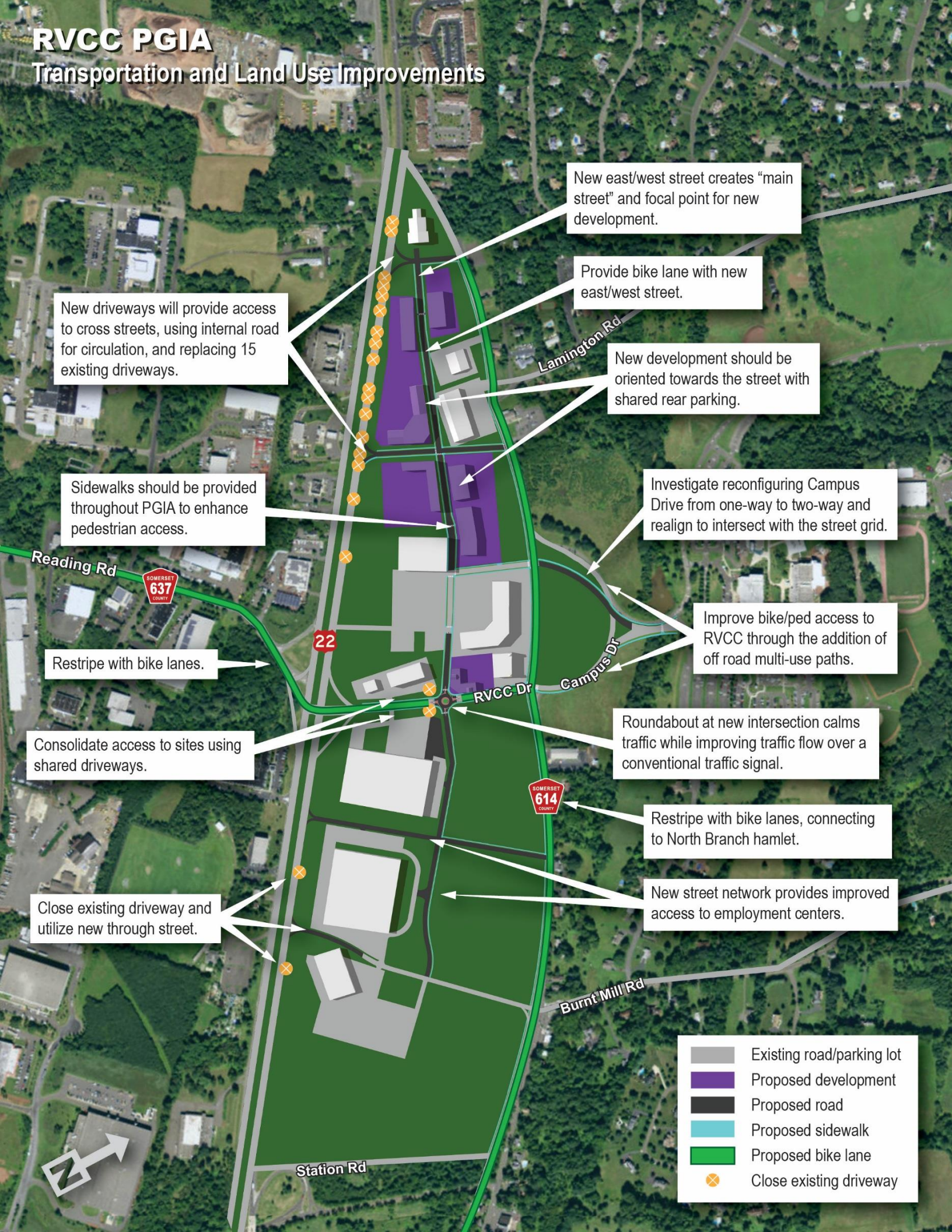
Hamlet Expansion

Conceptual rendering of transportation improvements to support the potential redevelopment scenarios.



RVCC PGIA

Transportation and Land Use Improvements



New east/west street creates "main street" and focal point for new development.

Provide bike lane with new east/west street.

New development should be oriented towards the street with shared rear parking.

Investigate reconfiguring Campus Drive from one-way to two-way and realign to intersect with the street grid.

Improve bike/ped access to RVCC through the addition of off road multi-use paths.

Roundabout at new intersection calms traffic while improving traffic flow over a conventional traffic signal.

Restripe with bike lanes, connecting to North Branch hamlet.

New street network provides improved access to employment centers.

New driveways will provide access to cross streets, using internal road for circulation, and replacing 15 existing driveways.

Sidewalks should be provided throughout PGIA to enhance pedestrian access.

Restripe with bike lanes.

Consolidate access to sites using shared driveways.

Close existing driveway and utilize new through street.

- Existing road/parking lot
- Proposed development
- Proposed road
- Proposed sidewalk
- Proposed bike lane
- Close existing driveway



Estimated Economic Impacts

	Scenario 1	Scenario 2	Scenario 3
Development Type	Total Square Footage	Total Square Footage	Total Square Footage
Hotel	299,000	41,400	41,400
Health Care Office/Lab	250,000	-	-
Apartment Housing	-	143,000	143,000
Prof Office	300,000	6,000	6,000
Retail/Store	112,500	154,400	154,400
Retail/Restaurant	37,500	51,500	51,500

Assumptions:

Retail is 75% stores and 25% restaurants; Hotel rooms are 920 SF per room

Residential in Scenarios 2 & 3 equal to 2200 SF per unit, and assumed to be 100% apartment/condo/townhouse

Data not available for estimating warehousing impacts in Scenario 1.

Additional development potential in Scenario 3 is not quantified and captured in the estimated economic impacts

Economic Impact of Scenario 1: Existing Zoning Buildout

	Geographical Level of Impacts		
	Somerset County	NJTPA	New Jersey
Direct employment	1,515	1,515	1,515
Total employment	2,467	3,018	3,028
Personal income (millions \$)	\$168.62	\$200.39	\$200.98
Business activity (millions \$)	\$376.15	\$463.60	\$465.57
State and Local Taxes (millions \$)	\$19.48	\$25.01	\$25.12
Federal Tax Revenue (millions \$)	\$37.22	\$45.18	\$45.33
Total Tax Revenue (millions \$)	\$56.70	\$70.18	\$70.45

Economic Impact of Scenario 2: North Branch Hamlet Expansion

	Geographical Level of Impacts		
	Somerset County	NJTPA	New Jersey
Direct employment	291	291	291
Total employment	396	458	459
Personal income (millions \$)	\$17.75	\$21.36	\$21.44
Business activity (millions \$)	\$41.72	\$51.73	\$51.99
State and Local Taxes (millions \$)	\$3.59	\$4.22	\$4.24
Federal Tax Revenue (millions \$)	\$4.10	\$5.01	\$5.03
Total Tax Revenue (millions \$)	\$7.69	\$9.23	\$9.27

Economic Impact of Scenario 3: Hamlet Expansion + College Commons

	Geographical Level of Impacts		
	Somerset County	Somerset County	Somerset County
Direct employment	291	291	291
Total employment	396	458	459
Personal income (millions \$)	\$17.75	\$21.36	\$21.44
Business activity (millions \$)	\$41.72	\$51.73	\$51.99
State and Local Taxes (millions \$)	\$3.59	\$4.22	\$4.24
Federal Tax Revenue (millions \$)	\$4.10	\$5.01	\$5.03
Total Tax Revenue (millions \$)	\$7.69	\$9.23	\$9.27

IMPORTANT NOTE: Maximized economic impacts: Impacts at full-build out/occupancy, and all workers are new to NJ (not relocated from elsewhere in the state or NJTPA region)

Model: IMPLAN multi-regional input-output model incorporating Somerset County, NJTPA region and NJ State areas.



Description

Location / Bridgewater Township, NJ

Acreage / Approx. 206

Existing Uses

Warehouse, shipping/logistics, indoor commercial recreation

Current Zoning

M-1C Manufacturing; HEC Highway Enterprise Center

PGIA Summary

The PGIA is relatively compact and self-contained due to I-287 to the south/west, the quarry to north, and natural features including greenfields, a stream and woods to the east. The Township amended the zoning for this area several years ago in anticipation of significant improvements being made to this interchange. Construction is nearing completion, and potential development projects for parcels on the north side of U.S. Route 22 are moving forward. However, there has been limited development activity to the south of U.S. Route 22. The area of focus is on the south side of U.S. Route 22 to the east and west of Chimney Rock Road.

PGIA Map



Multi-Modal Access Metrics

NJ TRANSIT Access



LIMITED NJ TRANSIT BUS AND RAIL SERVICE

Network Walking Reach



NOT WALKABLE

Access Summary

Multi-modal access metrics indicate an auto-centric environment. Small portions of the PGIA are accessible to existing NJ TRANSIT bus stops along U.S. Route 22 and NJ Route 28 and within one mile of the Bridgewater train station. The PGIA is 'not walkable' due to limited roadway connectivity. Several barriers surround and traverse the PGIA, limiting access to and within the PGIA. The limited circulation options also contribute to high levels of congestion, high traffic volumes, and a challenging environment for bicyclists. A detailed analysis of the transportation infrastructure can be found in Technical Memorandum 4.

Strength

S

- Direct access to the regional highway network (U.S. Route 22)
- Direct access to the interstate highway network (I-287)
- Proximate to NJ TRANSIT bus service along U.S. Route 22 and NJ Route 28;
- Bridgewater rail station is approximately 1.5 miles from the PGIA
- North side of the PGIA has plans for new commercial development

Weakness

W

- Auto-centric access
- Very limited street network provides minimal connectivity and restricts access and circulation for all modes both within the PGIA and external connections to the PGIA
- High traffic congestion and crash rate along the U.S. Route 22 corridor
- Minimal existing sidewalk infrastructure
- Stressful environment for cycling and walking
- Limited transit access on-site
- Many existing small lots constrain land assembly required for larger-scale redevelopment

Opportunity

O

- Completion of the grade-separated interchange of U.S. Route 22 at Chimney Rock Road and reconfiguration of U.S. Route 22 will improve access to the PGIA, reduce congestion, and improve north/south mobility, both regionally and within the PGIA
- Favorable ILV ratio indicates redevelopment opportunities
- Significant percentage of vacant developable land
- Four parcels identified as high priority areas for workforce housing
- Nearby Somerville Hospital is newly affiliated with the Robert Wood Johnson Health network
- Local training needs create consistent demand for quality hotel space

Constraint

C

- U.S. Route 22 is a barrier to north/south mobility through the PGIA
- I-287, topography, and the Middle Brook constrain access to the PGIA from the west, north, and east, respectively
- The PGIA contains 5 contaminated sites and areas with groundwater contamination
- Wetlands and the 100-year flood plain are barriers to development in the northeast portion of the PGIA

Scenario 1:

Existing Zoning Buildout

The existing zoning for this area promotes the consolidation of lots and creation of an office and business center with supportive hospitality amenities. The HEC zoning also permits research labs and health-related uses including medical outpatient facilities and fitness centers. Some accessory retail uses (as part of an office and business center) may also be included as amenities. The numbers below represent a full buildout of all existing sites under the current zoning, assuming lot consolidation and the Economic Development option of the M1-C zone.

Scenario 2:

Medical and Wellness Focus

Uses related to health care practice and research, as well as complementary uses, are emphasized in this scenario. As noted, the HEC and M-1C zoning both permit medical-support facilities such as out-patient rehabilitation and surgery centers. Additional uses include off-site support for hospitals. The site's development as a cluster of such facilities may also include some ancillary retail such as a pharmacy and/or fitness center. Changes to the roadway network, particularly on the east side of Chimney Rock Road, would enhance the development potential of this area.

Block 234 (M1-C Zone)

- 150-room hotel (5 stories)
- ±95,000 sf professional office or outpatient medical facilities
- ±15,000 sf ancillary retail
- FAR ±0.36 including bonus for hotel; Impervious coverage ±30%

Block 356 (HEC Zone)

- ±375,000 sf research labs and/or professional office
- ±250,000 sf outpatient medical facilities
- 20,000 sf fitness center
- ±32,000 sf ancillary retail
- FAR ±0.35; Impervious coverage ±40%

Block 234

- 120-unit assisted living facility (3 stories)
- ±125,000 sf outpatient medical facilities
- ±12,000 sf ancillary retail
- FAR ±0.30; Impervious coverage ±30%

Block 356

- ±220,000 sf outpatient medical facilities
- ±300,000 sf research and laboratory
- 20,000 sf fitness center
- FAR: ±0.30; Impervious coverage ±40%, including parking structure

Scenario 3:

Health Care/Innovation District

This scenario combined aspects of the first two scenarios and proposed adjusting the existing zoning regulations to better promote redevelopment.

Two distinct nodes would remain on the east and west sides of Chimney Rock Road. The east side would generally retain the character of the HEC zoning with an updated and adjusted list of permitted uses and an increase in permitted development intensity. The west side would be covered by a new zone similar to the existing M-1C district, with a new focus on health care and research and increased development intensity permitted if all lots were consolidated. The existing requirement for a hotel in the M-1C would be removed, though hotels would remain as a

permitted use in both districts. There is also the potential for the roadway network improvements noted in Scenario 2 to be incorporated in this scenario if the parcels were developed as a whole and could provide a framework for phasing development, allowing some existing uses to remain as new ones are built. The newly created zones could be renamed to include the focus aspects of this scenario; for example, a Medicine, Health and Innovation Zone with the east and west sides known as MHI-1 and MHI-2, respectively.

Block 234

- 150-room hotel (5 stories)
- ±100,000 sf outpatient medical facilities (2 to 3 stories)
- 20,000 sf fitness center
- ±25,000 sf retail
- FAR ±0.40; Impervious coverage ±50%

Block 356

- ±400,000 sq. ft. research and laboratory facilities (1 to 3 stories)
- ±300,000 outpatient medical facilities (2 to 3 stories)
- ±50,000 sf retail
- FAR: ±0.40; impervious coverage ±45% including parking structure



Top: Aerial of the existing Chimney Rock PGA.

Left: Example of a medical office complex with a campus-style site layout in Hamilton, NJ. Parking is concentrated along the periphery, with the buildings clustered together and linked by walkways, allowing staff and patients to easily walk to different offices and providing outdoor space as an amenity.

(aerial images courtesy of Bing Maps)

Multimodal Transportation Improvements

The PGIA focus area south of U.S. Route 22 is severely constrained both by highway and geographic barriers. The completion of the Chimney Rock interchange project will significantly improve regional access to and through the PGIA, as well as connect the northern and southern halves of the PGIA.

New development within the focus area should include transportation improvements that enhance roadway connectivity, access, and internal circulation patterns. An internal street grid should be created within the focus area that provides multiple intersections along Chimney Rock Road and enables internal circulation among different properties. Individual property access points along Chimney Rock Road should be consolidated, with primary access provided via side streets along the new internal street network.

New development should support multi-modal access and connectivity. A campus-style site layout would encourage walking among different properties and uses within the PGIA. Sidewalks should be provided throughout the roadway network, with additional walkways to

create more direct pedestrian connections among destinations, where appropriate. Shared parking and cross access would allow buildings to be clustered closer together and reduce parking lot size, creating a more walkable environment.

Opportunities should also be explored to install a bicycle and pedestrian multi-use path and bridge over the Middle Brook, linking the PGIA to residential neighborhoods to the east, and enabling residents to bike and walk to potential commercial, medical, and employment destinations throughout the PGIA. It would create a comfortable environment for walking and biking and an alternative to the highway barriers surrounding the PGIA. The bridge would also connect to existing trails along the Middle Brook, expanding the County's greenway network.

Transit access should also be enhanced. Bus stops along U.S. Route 22 and NJ Route 28 should have shelters and complete sidewalk connections to the PGIA. Opportunities for a shuttle to provide a "last mile" connection between the PGIA and the nearby Bridgewater rail station should also be explored.

Chimney Rock Interchange PGIA

Transportation and Land Use Improvements

Investigate opportunities to connect Frontier Rd to Foothill Rd, enhancing regional connectivity and PGIA access.

On-going US 22 interchange improvements enhance access to/within PGIA and regional mobility.

Provide PGIA connections to new interchange sidewalks along Chimney Rock Rd to allow pedestrian access across US 22 and link the northern and southern portions of the PGIA.

Fill sidewalk gaps along Chimney Rock Rd to provide continuous sidewalk network and improve access to transit.

Investigate opportunities for bike/ped connection across Middle Brook to residential neighborhoods.

Proposed Medical & Wellness District

Proposed Medical & Innovation District

Proposed Chimney Rock Crossing

Proposed Chimney Rock Crossing

-  Existing Road
-  Rt 22 Interchange Improvements
-  Potential Bike/Ped Connection
-  Potential Road Network Improvement
-  PGIA Boundary
-  Wetlands



Estimated Economic Impacts

	Scenario 1	Scenario 2	Scenario 3
Development Type	Total Square Footage	Total Square Footage	Total Square Footage
Hotel	138,000	-	138,000
Health Care Office/Lab	485,000	659,400	800,000
Apartment Housing	-	81,600	-
Prof Office	235,000	-	-
Retail/Store	55,250	29,000	76,250
Retail/Restaurant	11,750	3,000	18,750

Assumptions:

Retail is 75% stores and 25% restaurants; Hotel rooms are 920 SF per room

Assisted living is 800 SF per unit and 15% healthcare and 85% apartment

Fitness centers are considered retail/store

Residential is 100% apartment/condo/townhouse

Economic Impact of Scenario 1: Existing Zoning Buildout

	Geographical Level of Impacts		
	Somerset County	NJTPA	New Jersey
Direct employment	1691	1,691	1,691
Total employment	2,868	3,516	3,529
Personal income (millions \$)	\$203.99	\$242.22	\$242.95
Business activity (millions \$)	\$445.41	\$550.78	\$553.23
State and Local Taxes (millions \$)	\$21.04	\$27.67	\$27.80
Federal Tax Revenue (millions \$)	\$44.04	\$53.61	\$53.80
Total Tax Revenue (millions \$)	\$65.08	\$81.27	\$81.60

Economic Impact of Scenario 2: Medical and Wellness Focus

	Geographical Level of Impacts		
	Somerset County	NJTPA	New Jersey
Direct employment	1,414	1,414	1,414
Total employment	2,523	3,098	3,111
Personal income (millions \$)	\$180.41	\$214.81	\$215.55
Business activity (millions \$)	\$386.67	\$481.94	\$484.48
State and Local Taxes (millions \$)	\$16.49	\$22.39	\$22.52
Federal Tax Revenue (millions \$)	\$37.35	\$45.95	\$46.15
Total Tax Revenue (millions \$)	\$53.85	\$68.34	\$68.66

Economic Impact of Scenario 3: Medicine, Health and Innovation District

	Geographical Level of Impacts		
	Somerset County	Somerset County	Somerset County
Direct employment	1,819	1,819	1,819
Total employment	3,209	3,931	3,948
Personal income (millions \$)	\$225.12	\$268.32	\$269.26
Business activity (millions \$)	\$487.24	\$606.87	\$610.08
State and Local Taxes (millions \$)	\$21.75	\$29.15	\$29.32
Federal Tax Revenue (millions \$)	\$46.92	\$57.71	\$57.96
Total Tax Revenue (millions \$)	\$68.66	\$86.86	\$87.27

IMPORTANT NOTE: Maximized economic impacts: Impacts at full-build out/occupancy, and all workers are new to NJ (not relocated from elsewhere in the state or NJTPA region)

Model: IMPLAN multi-regional input-output model incorporating Somerset County, NJTPA region and NJ State areas.

INDUSTRIAL COMPLEX



Description

Location / Franklin Township, NJ

Acreage / Approx. 2900

Existing Uses

Primarily industrial/flex (~10 million sf) and office space (4.5 million sf); multi-family residential developments; retail node near intersection of Elizabeth Ave & Schoolhouse Rd; several hotels in eastern portion of PGIA along World's Fair Drive

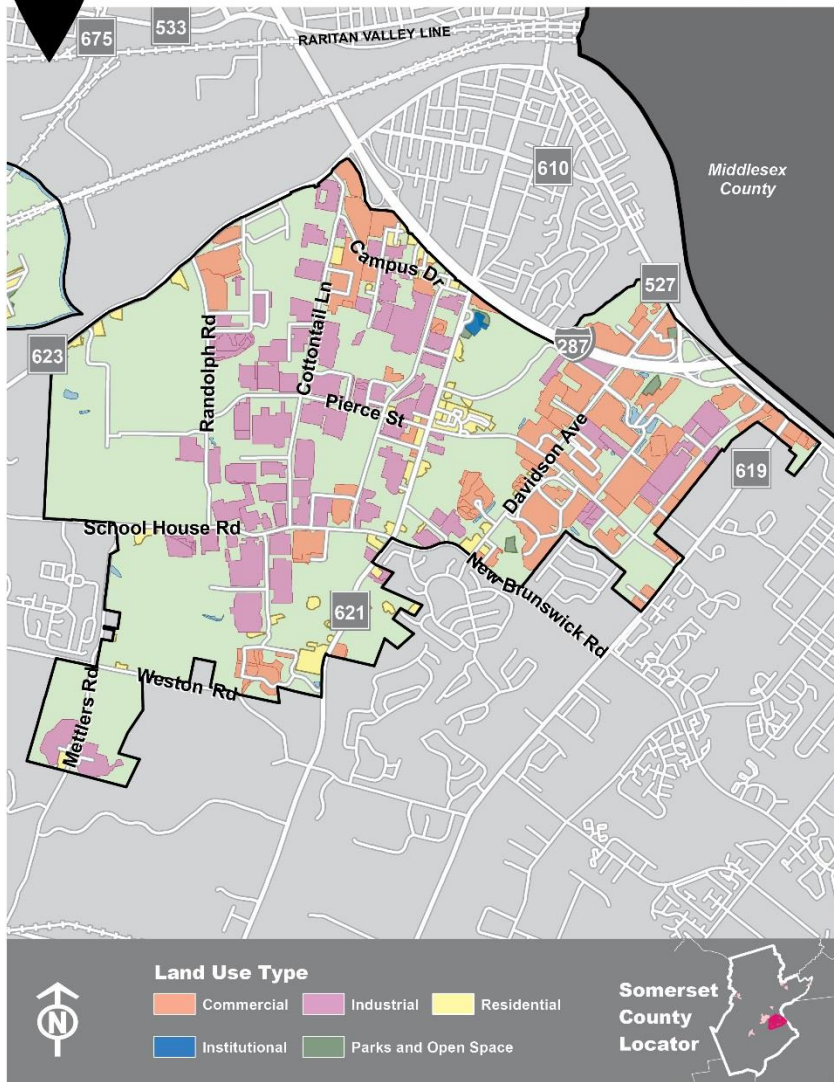
Current Zoning

C-B Corporate Business; C-R Cluster Residential; G-B General Business; M-1 and M-2 Light Industrial; PAC Planned Adult Community; R-O-L Research Office Laboratory; RR-3 Rural Residential; RDO Retail District Overlay

PGIA Summary

This large PGIA site is located directly off I-287 outside New Brunswick. Existing uses and structures on the site are characterized by low-density warehouses, office, and light industrial uses surrounded by large surface parking lots. Nearby areas include strip retail centers and motels. Approximately 450 acres of the westernmost portion of the site is comprised of undeveloped properties. As such, each of the development concepts focus on infill and redevelopment for the easternmost portion of the site, closer to Interchange 10 of I-287.

PGIA Map



Multi-Modal Access Metrics

NJ TRANSIT Access



LIMITED NJ TRANSIT RAIL SERVICE

Network Walking Reach



SLIGHTLY WALKABLE

Access Summary

Multi-modal access metrics indicate an auto-centric environment. There are no existing NJ TRANSIT services within the PGIA, though the northern fringe is within one-mile of the Bound Brook train station. The PGIA is 'slightly walkable' due to the low density of the roadway network. The limited roadway connectivity and relatively long distances between intersections discourages walking and biking, and contributes to high traffic volumes. A detailed analysis of the transportation infrastructure can be found in Technical Memorandum 4.

Strength

S

- Large overall land area provides flexibility for a variety of redevelopment and transportation improvement opportunities
- Direct access to interstate highway (I-287) at two separate interchanges
- Several existing dedicated on-road and off-road bicycle facilities improve conditions for cyclists
- Proximity to Rutgers University, New Brunswick, and the Regional Center provides access to a variety of resources, amenities, and workforce

Weakness

W

- Auto-centric access
- Limited street network and connectivity limit mobility options for all modes
- I-287 and County Road 527 are congested corridors
- Minimal existing pedestrian infrastructure
- Stressful environment for cycling and walking
- Transit access limited to Somerset County shuttles

Opportunity

O

- High office space vacancy
- Existing low density development pattern provides potential for infill development
- Large amount of vacant potentially developable land
- Favorable ILV ratio indicates redevelopment opportunities
- Existing road widths allow potential for reconfiguration within the existing cartway for bicycle and pedestrian facilities
- Twenty parcels identified as high priority areas for workforce housing
- Elizabeth Avenue can be re-envisioned as a mixed-use corridor

Constraint

C

- Contains 12 contaminated sites
- I-287 is a barrier to local roadway connectivity, limiting access to the PGIA from the north
- With few existing crossings, the Raritan and Millstone Rivers and D&R Canal limit access and local mobility to the west, north, and northeast
- Wetlands and streams constrain opportunities for new roadway connections, such as between New Brunswick Road and Grant Street, and between Davidson Avenue and Atrium Drive

Scenario 1:

Existing Zoning Buildout

Due to the site's location near employment centers and highways, several smaller hotel and conference facilities have been developed nearby. One option of a full buildout per the existing zoning would create a more fully integrated office, hotel, and conference center. A 200-room hotel with extensive conference facilities would complement the adjacent Garden State Exhibit Center while providing an additional venue in the area. Modern office and laboratories would be complimented by limited accessory retail uses. Existing parcels should be consolidated to provide unified access and shared parking utilized to encourage increased density and public transportation use.

- 13 million square feet building area overall, including:
 - 1.25 million sf office
 - 1 million sf retail
 - 4 million sf research/lab/tech
 - 4 million sf warehouse/flex
 - 2,500 hotel rooms
- Mostly one-story, with office and research 2-3 stories and hotels 5-6 stories
- Parking can be accommodated in decks and surface spaces scattered throughout, while keeping overall impervious coverage lower than required
- Average FAR (all zones combined): 0.41
- Site impervious cover: 52%

Scenario 2:

Mixed-Use Office, Hotel, Retail

The I-287 Industrial Complex PGIA is the Township's primary office and industrial office base and this scenario capitalizes on the existing infrastructure and convenience of the area while providing enhanced connectivity, transportation, and circulation improvements. Reconfiguring larger parcels, utilizing shared parking, and conceptualizing arterial streets as regional main streets with retail and food services may mitigate the large amount of impervious surface in the area and provide additional amenities for office tenants. There is also the opportunity for some limited mixed residential uses along the commercial corridors. Additionally, recreation and indoor sports facilities may serve as infill development within underperforming office sites. Improving internal site and parcel circulation along with shared parking and cross access eastments would address intersection congestion and heavy left turning-movement constraints throughout the focus area.

- Retains general density from existing zoning while allowing for greater flexibility of uses and increased heights, including some 2- to 3-story mixed-used buildings such as office space over retail.
- 13 million square feet in total:
 - 1 million sf office
 - 1.75 million sf retail
 - 3 million sf research/lab/tech
 - 4 million sf warehouse/flex
 - 2,500 hotel rooms
 - Approx. 200 residential units over retail
- Parking scenario utilizes shared parking between office and retail due to increased retail presence
- Average FAR of total site area: 0.40
- Site impervious cover: 45%

Scenario 3:

Mixed-Use Office, Hotel, Retail, and Residential

The primary emphasis of this scenario is to create a more active place, at more times throughout the week day and into the weekends. The eastern node around Interchange 10 is targeted for short-term improvements. Longer term, the Elizabeth Avenue corridor could be reconfigured through infill and focused new development to become a better-integrated mixed-use commercial and residential area, with increased density and minimal surface parking lots close to the street. Shared parking can be utilized across the development area where appropriate and new roads will enhance connectivity between proposed residential and employment centers. This mixed-use scenario could allow for more residential throughout the area than in Scenario 2, including a variety of typologies such as townhomes, workforce housing or senior residences, and upper-floor apartments over retail. Residential should be ancillary to commercial uses and integrated into mixed-use developments.

- Increase in density to 0.55 FAR with diverse uses and building typologies to reduce impervious coverage
- Assumes average building is 2.5-3 stories, not including single-story warehouses
- 16 million square feet in total:
 - 1.75 million sf office (10%)
 - 2 million sf retail (15%)
 - 3 million sf research/lab/tech (20%)
 - 5.5 million sf warehouse/flex (30%)
 - 2,750 hotel rooms (15%)
 - Potential for residential units in mixed-use buildings to be included over time to support commercial development and create vibrant mixed-use places
- More opportunities for shared and structured parking due to increased density and heights
- Site impervious cover: 45%

Conceptual rendering of a regional main street with mixed-use development. Bike lanes, wide sidewalks, pedestrian-scale lighting, improved crossings, and minimal building set-backs encourage active transportation. Parking is relocated to the rear and shared among adjacent parcels.





Within Somerset County and its neighboring counties, there are several examples of new mixed-use development accompanied by multi-modal streetscape improvements along a regional main street. These include in Robbinsville along NJ Route 33 (top and middle) and in Somerville along NJ Route 28 (bottom).

Multimodal Transportation Improvements

Focusing on the eastern portion of the PGIA, the transportation improvement concepts seek to support a vision for regional main street development, with an emphasis on multi-modal access and enhanced connectivity across the PGIA and to surrounding areas.

A series of proposed roadway improvements would extend existing roads or construct new roads, filling gaps in the roadway network, enhancing connectivity, and benefiting all modes. All new roads would be designed following Complete Streets principles, providing accommodations for pedestrians, bicyclists, and vehicles. The improved connectivity would improve access to the regional main streets from surrounding supportive office, industrial, and residential uses. With additional route choices, traffic is dispersed, alleviating congestion and heavy turning movements at intersections. Sidewalk construction throughout the roadway network would improve pedestrian circulation through the PGIA and access to the regional main streets. Pierce Street could be restriped with bike lanes to provide an additional

east/west route for cyclists. A bicycle/pedestrian-only connection on Lawndale Drive/9th Street could enhance access to the PGIA from the residential neighborhoods to the east.

Over time, Elizabeth Avenue and Davidson Avenue may be targeted for commercial uses and reconceptualized as regional main streets. Within the existing cartway width, the roads could be restriped with bike lanes, providing dedicated space for cyclists and connectivity to South Bound Brook and existing bike lanes along New Brunswick Road. To create a more pedestrian friendly environment, sidewalks would be constructed along the corridors, crossings would be enhanced, set-backs would be reduced to encourage commercial development closer to the roadway, and shared parking located in the rear of the buildings would create denser, more walkable mixed-use nodes.

Roadway and streetscape design should follow the best practices for Complete Streets, such as the NACTO Urban Street Design Guide.

I-287 Industrial Complex PGIA

Transportation and Land Use Improvements

Middlesex County



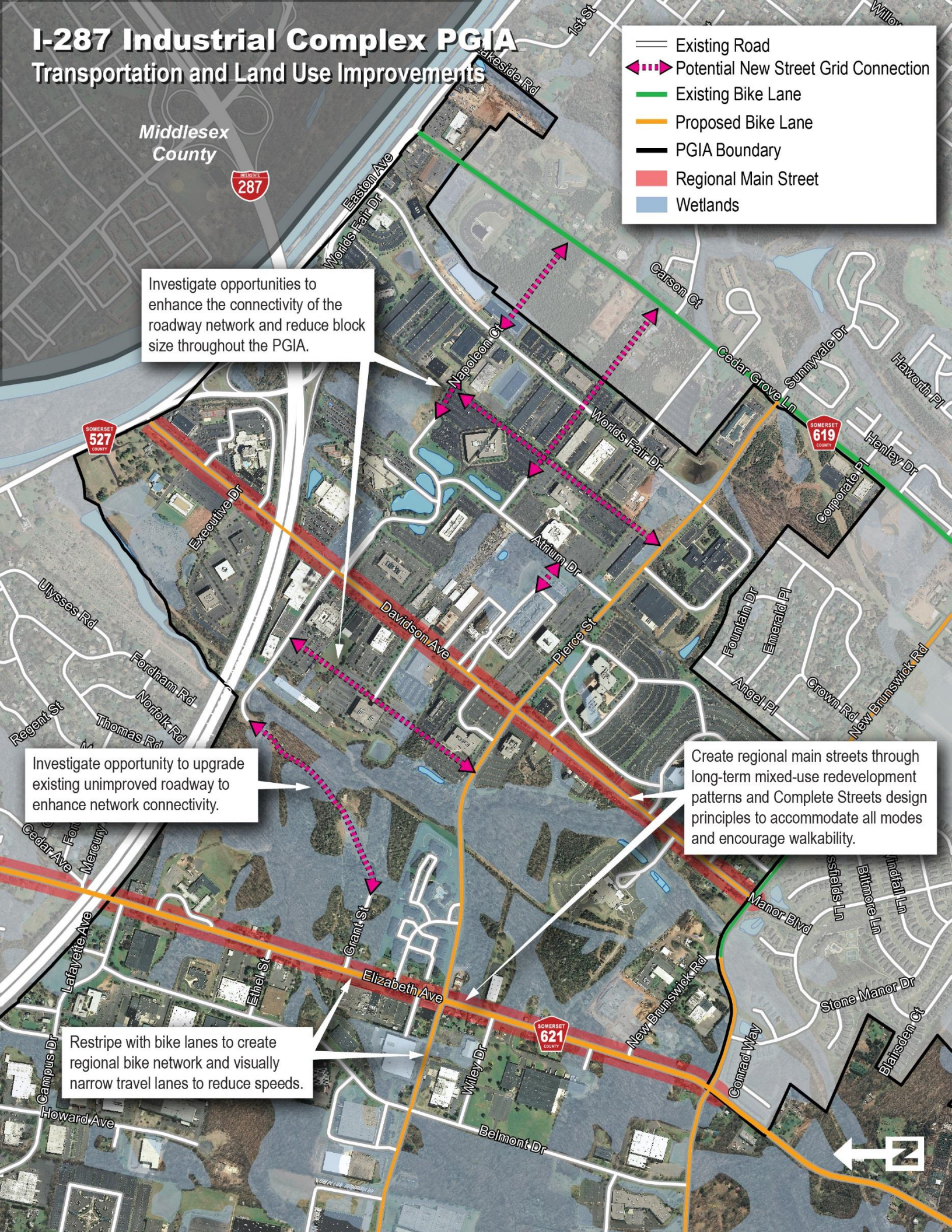
- Existing Road
- Potential New Street Grid Connection
- Existing Bike Lane
- Proposed Bike Lane
- PGIA Boundary
- Regional Main Street
- Wetlands

Investigate opportunities to enhance the connectivity of the roadway network and reduce block size throughout the PGIA.

Investigate opportunity to upgrade existing unimproved roadway to enhance network connectivity.

Create regional main streets through long-term mixed-use redevelopment patterns and Complete Streets design principles to accommodate all modes and encourage walkability.

Restripe with bike lanes to create regional bike network and visually narrow travel lanes to reduce speeds.



Estimated Economic Impacts

	Scenario 1	Scenario 2	Scenario 3
Development Type	Total Square Footage	Total Square Footage	Total Square Footage
Hotel	2,300,000	2,300,000	2,530,000
Health Care Office/Lab	4,000,000	3,000,000	3,000,000
Apartment Housing	-	240,000	-
Prof Office	1,250,000	1,000,000	1,750,000
Retail/Store	750,000	1,312,500	1,500,000
Retail/Restaurant	250,000	437,500	500,000

Assumptions:

Retail is 75% stores and 25% restaurants; Hotel rooms are calculated at 920 SF per room
 Data not available for estimating warehousing/flex space impacts in Scenarios 1, 2, and 3.
 Residential is 100% apartment/condo/townhouse and calculated at 1200 SF per unit

Economic Impact of Scenario 1: Existing Zoning Buildout

	Geographical Level of Impacts		
	Somerset County	NJTPA	New Jersey
Direct employment	13,347	13,347	13,347
Total employment	22,634	27,637	27,743
Personal income (millions \$)	\$1,553.85	\$1,850.49	\$1,856.53
Business activity (millions \$)	\$3,428.36	\$4,247.55	\$4,268.01
State and Local Taxes (millions \$)	\$166.27	\$217.42	\$218.54
Federal Tax Revenue (millions \$)	\$333.43	\$407.61	\$409.22
Total Tax Revenue (millions \$)	\$499.69	\$625.04	\$627.75

Economic Impact of Scenario 2: Mixed-Use Office, Hotel, Retail

	Geographical Level of Impacts		
	Somerset County	NJTPA	New Jersey
Direct employment	11,565	11,565	11,565
Total employment	19,139	23,245	23,332
Personal income (millions \$)	\$1,256.46	\$1,508.63	\$1,513.61
Business activity (millions \$)	\$2,814.85	\$3,486.43	\$3,503.26
State and Local Taxes (millions \$)	\$145.42	\$187.41	\$188.33
Federal Tax Revenue (millions \$)	\$273.62	\$334.45	\$335.77
Total Tax Revenue (millions \$)	\$419.04	\$521.86	\$524.10

Economic Impact of Scenario 3: Mixed-Use Office, Hotel, Retail

	Geographical Level of Impacts		
	Somerset County	Somerset County	Somerset County
Direct employment	13,617	13,617	13,617
Total employment	22,369	27,188	27,288
Personal income (millions \$)	\$1,491.40	\$1,775.78	\$1,781.40
Business activity (millions \$)	\$3,317.23	\$4,101.70	\$4,120.57
State and Local Taxes (millions \$)	\$172.79	\$222.04	\$223.09
Federal Tax Revenue (millions \$)	\$325.14	\$396.32	\$397.81
Total Tax Revenue (millions \$)	\$497.93	\$618.36	\$620.89

IMPORTANT NOTE: Maximized economic impacts: Impacts at full-build out/occupancy, and all workers are new to NJ (not relocated from elsewhere in the state or NJTPA region)

Model: IMPLAN multi-regional input-output model incorporating Somerset County, NJTPA region and NJ State areas.



Description

Location / Hillsborough Township, NJ

Acreage / Approx. 598

Existing Uses

Retail and other commercial, professional office, school, residential

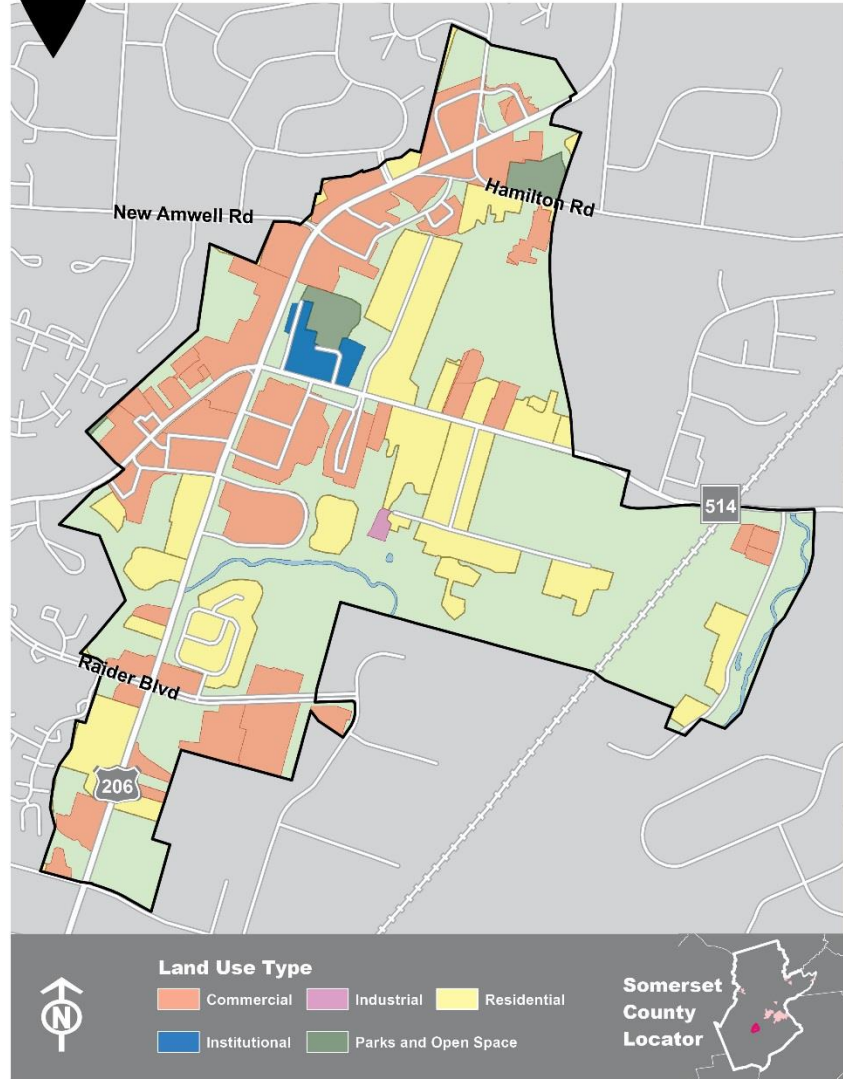
Current Zoning

Town Center, Gateway A, Gateway B

PGIA Summary

The Township has planned for a town center in this location and the zoning currently allows for a mix of land uses consistent with that vision. While there has been developer interest, the completion of the Route 206 bypass would allow for the type and scale of mixed-use development called for in the Township's Master Plan, and would be significantly enhanced with transit access. Both reactivation of passenger rail service along the West Trenton Line with a station in the vicinity of this area, as well as an interim commuter bus service are being considered. The focus area is the northwest quadrant flanking the U.S. Route 206 corridor centered between its intersections with Amwell Road and Hamilton Road. These scenarios would promote the circulation improvements set forth in the Township's Master Plan for this area.

PGIA Map



Multi-Modal Access Metrics

NJ TRANSIT Access



NO NJ TRANSIT BUS OR RAIL SERVICE

Network Walking Reach



SLIGHTLY WALKABLE

Access Summary

Multi-modal access metrics indicate an auto-centric environment. There are no existing NJ TRANSIT services within the PGIA, and the PGIA is 'slightly walkable' due to limited roadway connectivity. The limited connectivity also contributes to high levels of congestion, high traffic volumes, and a challenging environment for bicyclists. A detailed analysis of the transportation infrastructure can be found in Technical Memorandum 4.

Strength

S

- Existing pedestrian infrastructure provides connections to surrounding neighborhoods
- High median income in surrounding area
- Desirable quality of life and schools
- High quality housing stock
- Direct access to a regional highway (U.S. Route 206)

Weakness

W

- Auto-centric access
- Limited street network and connectivity
- Town lacks center
- Many small businesses not visible from U.S. Route 206 corridor
- Minimal existing sidewalk infrastructure
- Stressful environment for cycling and walking
- High traffic congestion & crash rate on U.S. Route 206
- Transit access limited to Somerset County shuttle

Opportunity

O

- Re-configure main intersection as town center
- Potential for significant new local road network
- Proposed West Trenton Line re-activation and Hillsborough station stop
- U.S. Route 206 bypass will relieve congestion and facilitate reconfiguration of the existing U.S. Route 206 corridor as Hillsborough's *Main Street*
- PGIA contains a designated redevelopment area

Constraint

C

- Contains 7 contaminated sites
- The limited access U.S. Route 206 bypass and West Trenton rail line constrain mobility and connectivity to the east of the PGIA
- Wetlands and a stream traverse the southern third of the PGIA, limiting opportunities for development or roadway connections

Scenario 1:

Existing Zoning Buildout

The existing zoning and Town Center concept permit a broad mix of nonresidential uses, as well as residential within certain limitations. This scenario assumes redevelopment of portions of the area would result in new retail space with upper floor office and residential uses in some locations, with building heights of two to three stories. Health-related uses including medical offices and fitness centers are permitted. Potential relocation of Hillsborough Elementary School is considered in all scenarios, with potential site redevelopment of the site.

Scenario 2:

Adjusted TC Zoning with Hospitality Focus

The Adjusted Town Center use mix would present more of a focus on tourism, hospitality and entertainment to tie into opportunities from the nearby Duke Farms, D&R Canal, and Sourlands Preserve. The creation of a node with shopping, restaurants and a quality hotel would be paired with traditional design. This scenario would be similar in terms of building heights and intensity to Scenario 1 with a modified mix of uses.

Scenario 3:

Adjusted Mixed-Use, with Transit

The town center approach would be adjusted further to take advantage of a new train station on a reactivated West Trenton Line a short distance to the east, or alternately, the provision of commuter bus service from this area. Development regulations based on the newly created Gateway C zone would allow for additional housing and mixed-use buildings, with strict guidelines on urban design and improved connectivity, particularly to the new train station. The emphasis would still be on creating an active node in the town center, which would also tie into the tourism and hospitality focus of Scenario 2.

- 500-550 residential units (mixed-use on upper two floors in Town Center zone, 4 units per acre in Gateway zone (GZ) as transitional area)
- 800k to 1M sf ground floor retail, recreation or other commercial (office not permitted on 1st floor in most of the area)
- 700k to 800k sf office (on upper floors in TC, ground floor in GZ)
- All with rear yard or alley-style parking for commercial buildings; none structured
- Overall site FAR approx. 0.40; overall 50% impervious
- Buildings will be 3 stories in height, with 2 or 2.5 stories in the Gateway zones
- Does not include redevelopment of existing Township properties such as firehouse, developments, and park & ride that appear to meet intention of TC ordinance

- 450-550 residential units (mixed-use multi-family throughout, primarily in central node of Amwell/US 206)
- 500-550 hotel rooms (1 or 2 properties)
- 1.25 million sf of ground floor retail, restaurants or other commercial
- 500,000 to 600,000 sf of office, primarily on upper floors
- Overall site FAR near 0.45, impervious coverage 50%
- Buildings 2-3 stories in height radiating from central intersection, except hotels may be 5 stories
- Development output includes all properties within targeted area regardless of existing development

- Using Scenario 2 as a starting point, additional residential units would be possible depending on future transit improvements
- 500 to 550 hotel rooms
- 1.25 to 1.5 million sf retail/recreation/restaurant
- 750,000 to 900,000 sf of office and flex space (not for traditional industrial, but could be medical or nontraditional office)
- Enhanced street network features opportunities for on-street parking; increased density may also permit shared parking between office/retail uses
- Overall site FAR ~0.60, impervious coverage 65%

Multimodal Transportation Improvements

Transportation improvements for the Hillsborough Town Center PGIA are centered along the U.S. Route 206 corridor and its intersection with Amwell Road (CR 514). The improvement concepts seek to create a town center at this major crossroads, transforming the existing corridor into a Complete Street with accommodations for all users. The improvements reflect the concepts put forth in the Township's *Transit Ready Development District and Circulation Plan Update*, and would coincide with the completion of the U.S. Route 206 Bypass.

The proposed new streets would significantly expand the roadway network and improve connectivity with the PGIA. Trips would be dispersed over the network, alleviating heavy turning movements at a single intersection. New development should emphasize shared, rear parking and cross access to consolidate parking and access points and contribute to a more walkable environment.

The existing U.S. Route 206 would be transformed to a local main street. New development would be brought up to the edge of the sidewalk. The typical cross section would include on-street parking, bike lanes, one travel lane in each direction, a landscaped median, and broad sidewalks with pedestrian scale lighting, street trees, and street furniture. The speed limit would be reduced to 25 mph.

As shown in the *Circulation Plan Update*, Amwell Road (CR 514) would maintain

two travel lanes in each direction, and could be improved with a landscaped median and multi-use paths along both sides.

Gateway treatments along U.S. Route 206 approaching the PGIA would delineate the change in roadway character and development context, signifying a change in speed for drivers.

The new bike lanes along U.S. Route 206 would connect with existing bike lanes to the north along New Amwell Road. At the southern end of the corridor, a detailed traffic study should investigate a potential road diet along Raider Boulevard and Auten Road, reducing the typical cross section from two lanes in each direction with a landscaped median, to one lane with a buffered bike lane. As a whole, the proposed improvements along U.S. Route 206, CR 514, and Raider Boulevard/Auten Road would create a connected bike network around and through the PGIA.

In the long term, reactivation of the West Trenton Line would provide important regional transit access to the PGIA. In the interim, bus service along the U.S. Route 206 corridor should also be evaluated. Initially, this could begin as a limited service and grow into something larger based on ridership and demand.

Roadway and streetscape design should follow the best practices for Complete Streets, such as the NACTO Urban Street Design Guide.

Hillsborough PGIA

Transportation and Land Use Improvements

Proposed Street Network

from "Transit Ready Development District
and Circulation Plan Update"
March 14, 2013
[New Municipal Streets]



Hillsborough Town Center

Conceptual rendering of improvements and redevelopment to transform the intersection of U.S. Route 206 and Amwell Road (CR 514).

Redefining U.S. Route 206

Buildings front sidewalks to create a downtown, 'Main Street' environment.

Complete Streets

U.S. Route 206 reconfigured with on-street parking, two travel lanes, landscaped median, and bike lanes to create a multi-modal, Complete Street with low travel speeds to fit the proposed town center context.



Pedestrian Space

Broad sidewalks with street trees along the curb zone create a buffer from traffic and a pedestrian-friendly, walkable streetscape.

Village Green

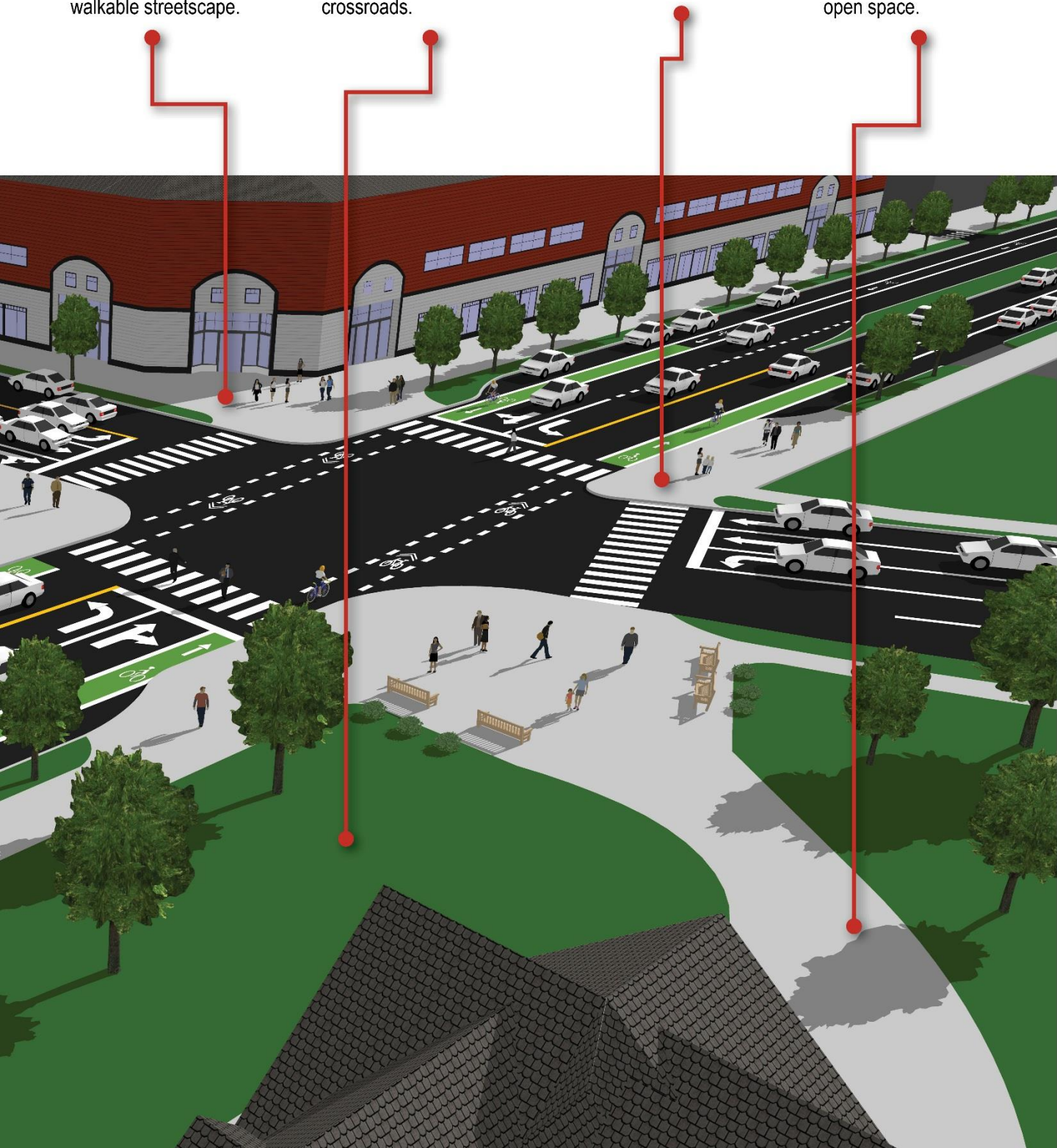
Park at northwest corner provides a village square and flexible community space at the Township's major crossroads.

Traffic Calming

Curb extensions shorten crossing, improve pedestrian visibility, provide more usable streetscape, and calm traffic.

Creative Reuse

Relocate parking at existing buildings to the rear, providing opportunities for outdoor dining and public open space.



Estimated Economic Impacts

	Scenario 1	Scenario 2	Scenario 3
Development Type	Total Square Footage	Total Square Footage	Total Square Footage
Hotel	-	483,000	483,000
Health Care Office/Lab	-	-	-
Apartment Housing	630,000	600,000	630,000
Prof Office	750,000	550,000	825,000
Retail/Store	675,000	937,500	1,031,250
Retail/Restaurant	225,000	312,500	343,750

Assumptions:

Retail is 75% stores and 25% restaurants

Hotel rooms are calculated at 920 SF per room

Residential is 100% apartment/condo/townhouse and is calculated at 1200 SF per unit

Economic Impact of Scenario 1: Existing Zoning Buildout

	Geographical Level of Impacts		
	Somerset County	NJTPA	New Jersey
Direct employment	2,858	2,858	2,858
Total employment	4,289	5,158	5,173
Personal income (millions \$)	\$271.88	\$322.06	\$322.88
Business activity (millions \$)	\$601.74	\$739.54	\$742.20
State and Local Taxes (millions \$)	\$35.85	\$44.72	\$44.87
Federal Tax Revenue (millions \$)	\$61.74	\$74.34	\$74.56
Total Tax Revenue (millions \$)	\$97.59	\$119.06	\$119.42

Economic Impact of Scenario 2: Adjusted Town Center Zoning with Hospitality Focus

	Geographical Level of Impacts		
	Somerset County	NJTPA	New Jersey
Direct employment	2,996	2,996	2,996
Total employment	4,387	5,219	5,236
Personal income (millions \$)	\$252.69	\$300.95	\$301.82
Business activity (millions \$)	\$577.01	\$709.78	\$712.61
State and Local Taxes (millions \$)	\$38.57	\$47.06	\$47.23
Federal Tax Revenue (millions \$)	\$58.02	\$70.14	\$70.37
Total Tax Revenue (millions \$)	\$96.59	\$117.20	\$117.59

Economic Impact of Scenario 3: Adjusted Mixed-Use, Plus Transit

	Geographical Level of Impacts		
	Somerset County	Somerset County	Somerset County
Direct employment	3,773	3,773	3,773
Total employment	5,598	6,694	6,715
Personal income (millions \$)	\$336.75	\$400.25	\$401.35
Business activity (millions \$)	\$761.72	\$936.24	\$939.83
State and Local Taxes (millions \$)	\$48.56	\$59.75	\$59.96
Federal Tax Revenue (millions \$)	\$77.09	\$93.03	\$93.32
Total Tax Revenue (millions \$)	\$125.65	\$152.78	\$153.28

IMPORTANT NOTE: Maximized economic impacts: Impacts at full-build out/occupancy, and all workers are new to NJ (not relocated from elsewhere in the state or NJTPA region)

Model: IMPLAN multi-regional input-output model incorporating Somerset County, NJTPA region and NJ State areas.



Description

Location / Manville Borough, NJ

Acreage / Approx. 1570

Existing Uses

Vacant Rustic Mall site; retail along S. Main Street

Current Zoning

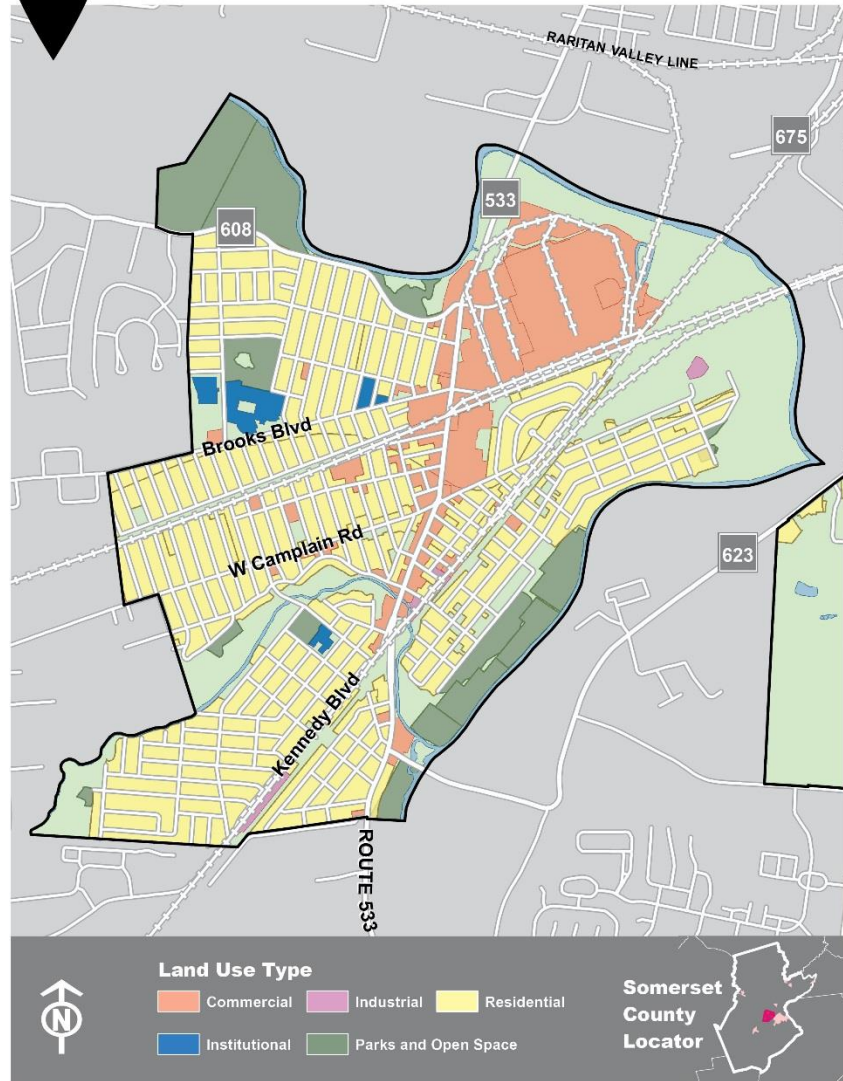
C-Commercial; Redevelopment Plan for Rustic Mall site

PGIA Summary

The former Rustic Mall site is a key redevelopment parcel in Manville’s commercial core. As the PGIA was determined to be the entire Borough, this site was chosen as the target due to its redevelopment potential.

The Rustic Mall site originally produced creosote before being developed into a shopping center in the 1950s. Since then, environmental remediation has been completed and there is currently a redevelopment proposal for multi-family residential with a small retail component on the site. An existing small commercial center is located on S. Main Street, directly adjacent to the site.

PGIA Map



Multi-Modal Access Metrics

NJ TRANSIT Access



NO NJ TRANSIT BUS OR RAIL SERVICE

Network Walking Reach



SLIGHTLY WALKABLE

Access Summary

While the PGIA lacks transit access, it has a robust existing sidewalk network and a relatively dense, well-connected roadway network that makes the PGIA accessible by walking and biking. However, several rail lines and the Royce Brook divide the network within Manville, while the Raritan River and Millstone Rivers are barriers to making regional connections further to the north and east. These barriers reduce the overall Network Walking Reach metric to 'slightly walkable'. A detailed analysis of the transportation infrastructure can be found in Technical Memorandum 4.

Strength

S

- Existing pedestrian infrastructure and walkable downtown
- Connectivity and density of the local roadway network is conducive to biking and walking
- Proximate to a regional highway (U.S. Route 206)
- Robust, interconnected roadway network
- Existing Main Street corridor well connected to residential neighborhoods
- Access to freight rail

Weakness

W

- Four significant crash clusters (>30 crashes) were identified along the South Main Street/County Road 533 corridor (2011-2013)
- Transit access is limited to Somerset County shuttle services
- PGIA has limited roadway connectivity to the north and east
- Lower median household income relative to other portions of the County
- Large gap between signal along S. Main St. make pedestrian crossing difficult

Opportunity

O

- Remediated Rustic Mall site ripe for walkable redevelopment connected to existing neighborhoods and Main Street
- Favorable ILV ratio indicates redevelopment opportunities
- Leverage Manville affordability relative to neighboring towns
- High population density and land use patterns facilitate walkable development and variety of mixed-uses
- Recent improvements to the turn capacity at Dukes Parkway crash hot spot

Constraint

C

- Contains 10 contaminated sites scattered throughout the PGIA
- Significant percentage of the PGIA lies within a flood plain and has a high flooding risk
- Natural features including Raritan and Millstone Rivers and the D&R Canal constrain mobility to the north and east of the PGIA.
- A stream and two rail lines through the PGIA limit roadway connectivity
- Roadway width, elevation, and geometry at the rail overpass constrain vehicle and pedestrian movement, (particularly for larger commercial vehicles) and create flooding hazard

Scenario 1:

Existing Redevelopment Plan Buildout

The current proposal for redevelopment of the Rustic Mall remediation site proposes approximately 250 residential units and 30,000 sf of retail space across nine buildings with surface parking lots throughout the site. This scenario is based on the resulting buildout from this proposal.

- 242 residential units
- 30,000 sf retail space
- Approx. 50% impervious cover
- Site FAR approx. 0.45

Scenario 2:

Mixed-Use Residential & Retail

The site's location adjacent to South Main Street provides an opportunity to connect the site to Manville's existing street grid. Inclusion of a mix of market-rate, age-restricted and income-restricted housing would be consistent with the housing cost advantages Manville offers relative to neighboring municipalities.

Residential and convenience retail uses on the Rustic Mall site would be laid out in a pedestrian-friendly street grid with a mix of parking where possible to minimize impervious coverage in this flood-prone area. The density on the Rustic Mall site may be increased, though buildings would not rise above three stories. The potential uses and site layout provide opportunities to address connectivity and parking issues in the vicinity, including providing safe pedestrian access to the existing retail in the area, enhancing loading capabilities for both new and existing businesses, accounting for additional parking to replace spaces lost due to development of the site, and addressing potential overflow from South Main Street.

- 275-300 residential units on Rustic Mall Site and South Main Street
- 75,000 sf first-floor retail (including existing South Main Street)
- Approx. 60% impervious coverage
- Site FAR approx. 0.60

Scenario 3:

Mixed-Use with Office/Flex

Considering the economic realities of the current retail market, the inclusion of office or flex commercial space provides another option for redevelopment, with the ability to assemble or divide up spaces on an adaptable basis relative to market demand to various uses over the long term. These spaces may be located on the first floor under residential uses and could be used as medical or professional offices, or as community space for residents. Office uses would provide an opportunity for shared parking due to the different peak demand times for residential, retail and office uses. Convenience retail would be included for residents. The site design and parking configuration would attempt to minimize impervious coverage while addressing connectivity- and parking-related issues with regard to South Main Street, such as improved truck loading practices. Additional parking on the site will address potential overflow from South Main Street and replace parking spaces lost due to development of the site.

- 150-175 residential units
- 10,000 sf first-floor retail
- 80,000 sf first-floor flex/office space
- Approx. 43% impervious coverage
- Site FAR approx. 0.50

Multimodal Transportation Improvements

Transportation improvements are centered on the Rustic Mall parcel, which is the focal point for redevelopment opportunities. The improvement concepts seek to create a walkable environment that both complements and enhances the existing South Main Street commercial district and surrounding residential area.

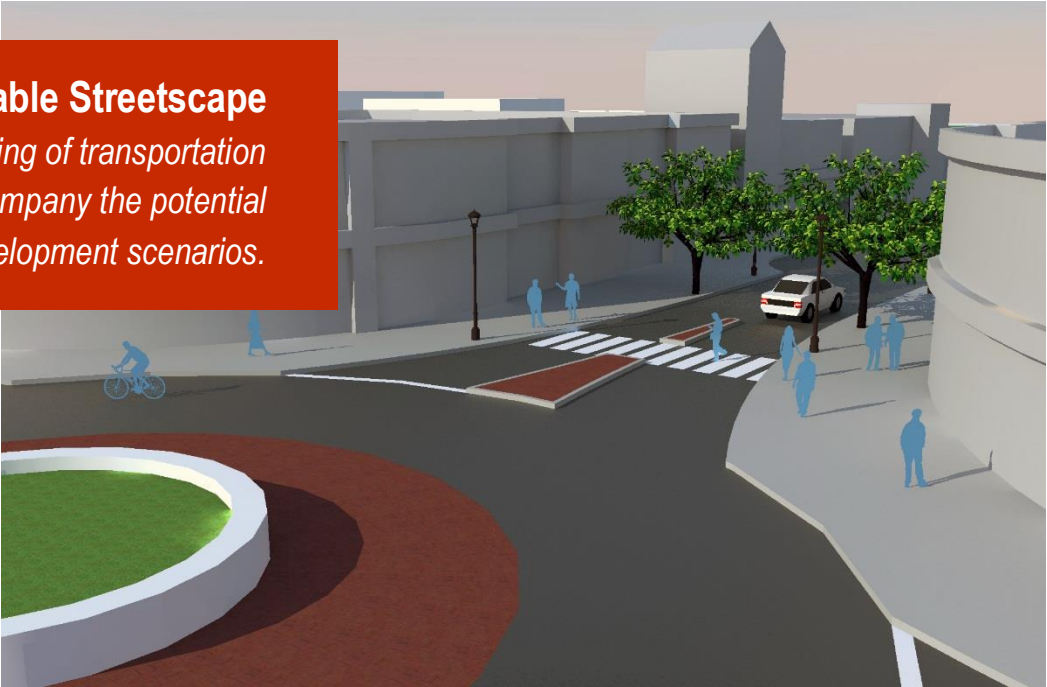
Proposed new streets and sidewalks integrate the Rustic Mall into the Borough’s existing street network by replicating a similar grid pattern and making connections at existing intersections. Rear access to the businesses along Main Street is improved for both pedestrians and vehicles by clearly defining access points and parking. Pedestrian accessibility is enhanced here and throughout the site with crosswalks and a complete sidewalk network. Additional pedestrian amenities include broad sidewalks through the center of the site, which would be the focus of new commercial activity;

midblock alleyways to improve pedestrian connectivity between buildings and parking; and a broad east-west pedestrian walkway with amenities such as street furniture and landscaping to link the new development with existing businesses to the west and residential neighborhoods to the east. Traffic calming measures, such as roundabouts, curb extensions, and on-street parking help to maintain low travel speeds. Parking is provided through a combination of on-street and surface lots. Truck access for deliveries is an important consideration for both existing businesses along Main Street and future development, and is accommodated through features such as a centrally designated curb-side loading zone, a mountable truck apron at the roundabouts, and appropriate turning radii at key intersections.

Road and streetscape design should follow best practices for Complete Streets, such as NACTO Urban Street Design Guide.

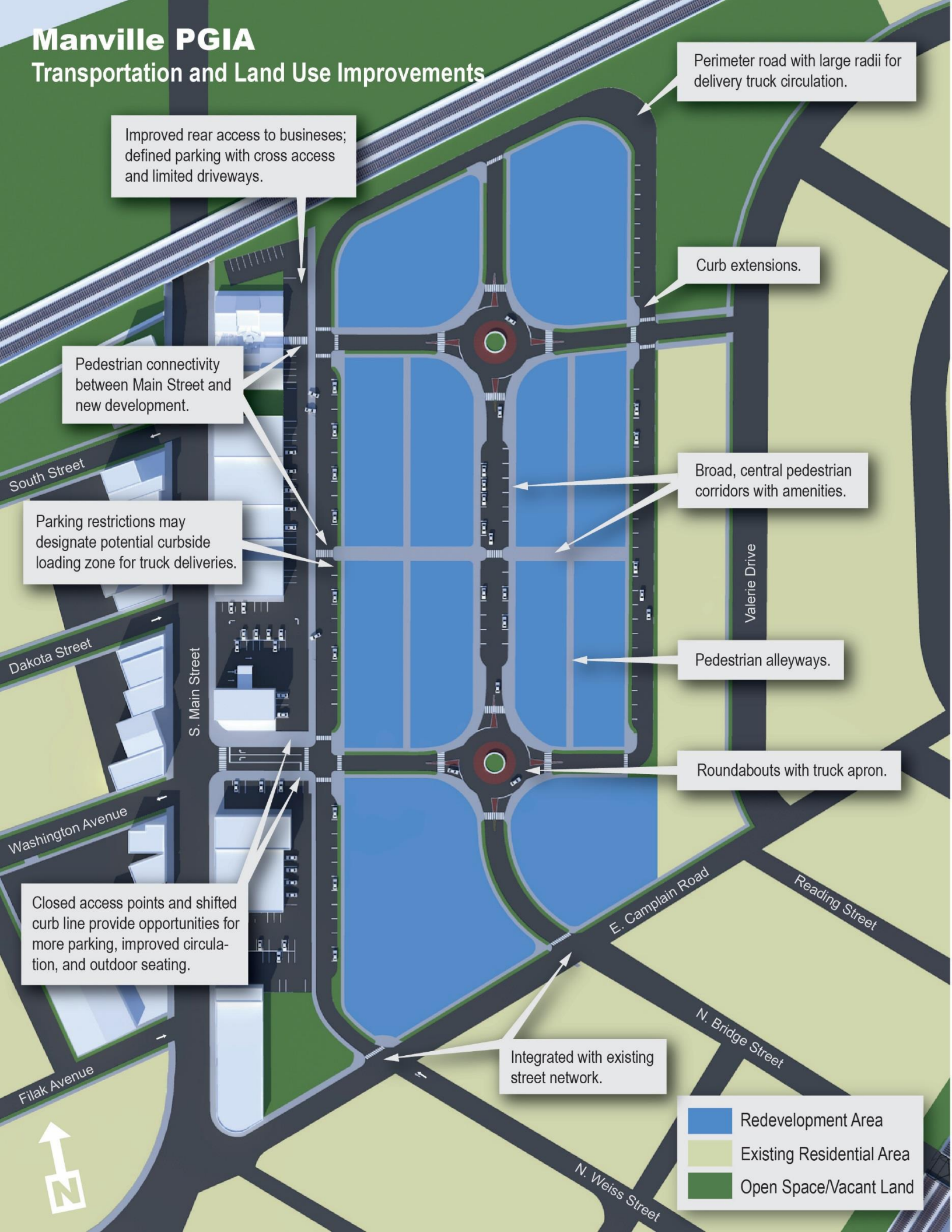
Walkable Streetscape

Conceptual rendering of transportation improvements to accompany the potential redevelopment scenarios.



Manville PGIA

Transportation and Land Use Improvements



Improved rear access to businesses; defined parking with cross access and limited driveways.

Perimeter road with large radii for delivery truck circulation.

Curb extensions.

Pedestrian connectivity between Main Street and new development.

Broad, central pedestrian corridors with amenities.

Parking restrictions may designate potential curbside loading zone for truck deliveries.

Pedestrian alleyways.

Roundabouts with truck apron.

Closed access points and shifted curb line provide opportunities for more parking, improved circulation, and outdoor seating.

Integrated with existing street network.

- Redevelopment Area
- Existing Residential Area
- Open Space/Vacant Land



Estimated Economic Impacts

	Scenario 1	Scenario 2	Scenario 3
Development Type	Total Square Footage	Total Square Footage	Total Square Footage
Hotel	-	-	-
Health Care Office/Lab	-	-	-
Apartment Housing	290,400	345,000	195,000
Prof Office	-	-	80,000
Retail/Store	22,500	56,250	7,500
Retail/Restaurant	7,500	18,750	2,500

Assumptions:

Retail is 75% stores and 25% restaurants

Residential is 100% apartment/condo/townhouse and is calculated at 1200 SF per unit

Economic Impact of Scenario 1: Existing Redevelopment Plan Buildout

	Geographical Level of Impacts		
	Somerset County	NJTPA	New Jersey
Direct employment	105	105	105
Total employment	141	162	162
Personal income (millions \$)	\$6.32	\$7.55	\$7.58
Business activity (millions \$)	\$14.84	\$18.24	\$18.32
State and Local Taxes (millions \$)	\$0.85	\$1.07	\$1.07
Federal Tax Revenue (millions \$)	\$1.39	\$1.70	\$1.71
Total Tax Revenue (millions \$)	\$2.24	\$2.77	\$2.78

Economic Impact of Scenario 2: Mixed-Use Residential & Retail

	Geographical Level of Impacts		
	Somerset County	NJTPA	New Jersey
Direct employment	167	167	167
Total employment	224	257	258
Personal income (millions \$)	\$9.92	\$11.87	\$11.91
Business activity (millions \$)	\$23.11	\$28.52	\$28.65
State and Local Taxes (millions \$)	\$1.56	\$1.90	\$1.91
Federal Tax Revenue (millions \$)	\$2.21	\$2.70	\$2.71
Total Tax Revenue (millions \$)	\$3.77	\$4.60	\$4.62

Economic Impact of Scenario 3: Mixed-Use with Office/Flex

	Geographical Level of Impacts		
	Somerset County	Somerset County	Somerset County
Direct employment	244	244	244
Total employment	377	458	459
Personal income (millions \$)	\$25.73	\$30.37	\$30.44
Business activity (millions \$)	\$56.91	\$69.64	\$69.87
State and Local Taxes (millions \$)	\$2.82	\$3.64	\$3.66
Federal Tax Revenue (millions \$)	\$5.79	\$6.96	\$6.98
Total Tax Revenue (millions \$)	\$8.62	\$10.60	\$10.63

IMPORTANT NOTE: Maximized economic impacts: Impacts at full-build out/occupancy, and all workers are new to NJ (not relocated from elsewhere in the state or NJTPA region)

Model: IMPLAN multi-regional input-output model incorporating Somerset County, NJTPA region and NJ State areas.



Description

Location / Warren Township, NJ

Acreage / Approx. 535

Existing Uses

Northern node - Vacant land; large office buildings (Citigroup Technical); small professional office facilities

Southern nodes - Mt. Bethel Corporate Center (Technology Drive); small professional offices (single- and multi-tenant); commercial recreation; catering venue; gas station; scattered single-family residences

Current Zoning

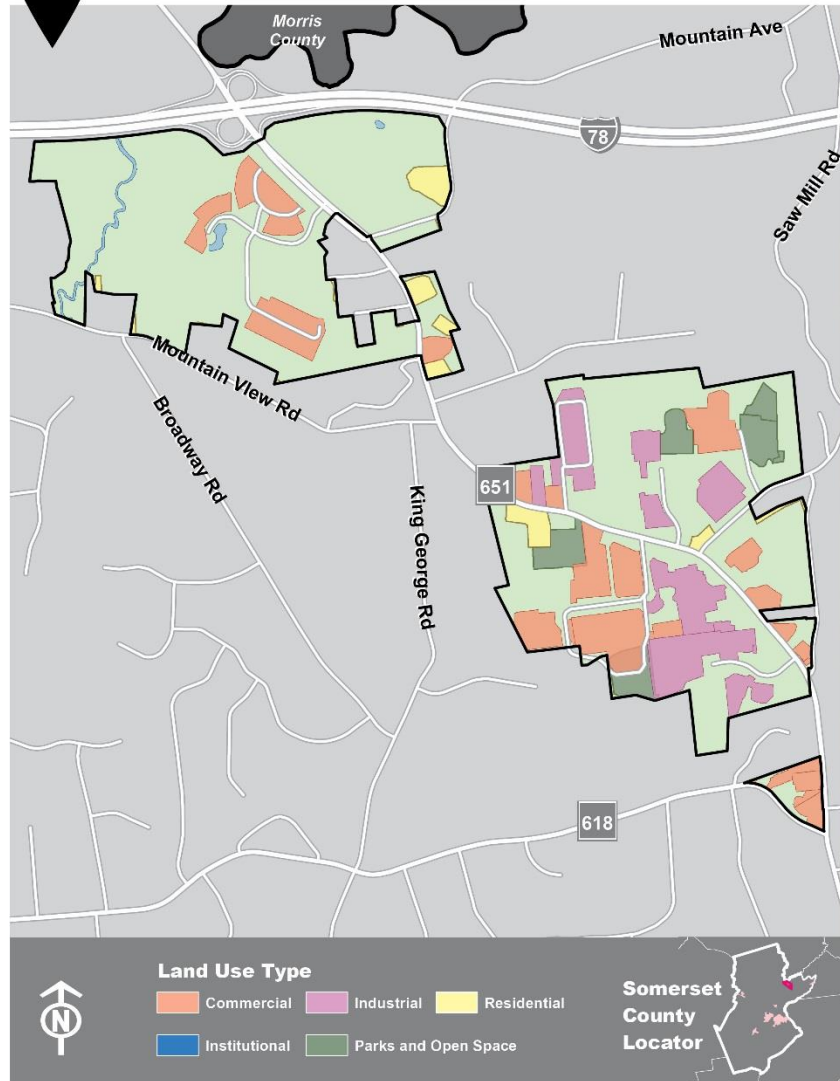
OR-Office Research; R-20V 1/2 acre residential; BR-40 1-acre Business Residential; CR-130/60 Cluster Residential; G-1 General Industrial

PGIA Summary

The overall PGIA is clustered into three distinct nodes. Generally, office space is the most common use throughout the PGIA, though vacancy levels and development potential vary. Though the area benefits from access to I-78, there is limited additional capacity along Mount Bethel and King George Roads. Development potential is primarily infill within the un- and underdeveloped parcels in the southern nodes, with the potential for a hotel use or denser corporate or technology hub in the northern node closest to I-78. There are also wetlands-related environmental constraints throughout the PGIA.



PGIA Map



Multi-Modal Access Metrics

NJ TRANSIT Access



NO NJ TRANSIT BUS OR RAIL SERVICE

Network Walking Reach



NOT WALKABLE

Access Summary

Multi-modal access metrics indicate an auto-centric environment. There are no existing NJ TRANSIT services within the PGIA, and the PGIA is 'not walkable' due to very limited roadway connectivity and the limited number of roads within the roadway network. The character of the roadway network also contributes to high levels of congestion, high traffic volumes, and a challenging environment for bicyclists. A detailed analysis of the transportation infrastructure can be found in Technical Memorandum 4.

Strength

S

- Direct access to the interstate highway system (I-78) provides good regional connectivity and access to the New York metro area
- Proximity to Warren village center provides access to shopping and dining amenities
- Low office vacancy (10%) compared to the regional average

Weakness

W

- Auto-centric access
- No transit access
- Minimal existing sidewalk infrastructure
- Connectivity and density of the existing roadway network is not conducive to walking
- Stressful environment for cycling and walking
- I-78 is a congested corridor and there is limited additional capacity along county road network

Opportunity

O

- Existing low density development pattern provides potential for infill development
- Address mobility limitations through shared access
- Evaluate potential connector roadways to surrounding regional network to mitigate intersection constraints
- Location between surrounding employment nodes and New York City create potential demand for a hotel
- Six parcels identified as medium priority areas for workforce housing

Constraint

C

- Contains 1 contaminated site
- Intersections are at capacity and constrain new development potential
- Streams and wetlands constrain development opportunities, particularly within northern node
- Wetlands preclude new roadway connections between Mt Horeb Road and the PGIA

Scenario 1:

Existing Zoning Buildout

Based on the existing zoning and an analysis of parcels with current development potential as provided by the Township, the existing use mix of office and light industrial would prevail. There is the potential for office or research space in the O-R zone and office, research, or industrial space in the GI zone. Additionally, single-family dwellings could be constructed in the R-20V zone. Maximum buildout of the targeted area would retain the existing productive and occupied buildings while constructing a variety of office, research, and/or flex space with both structured and surface parking where appropriate.

- 12-14 single-family residences in R-20V zone
- 200,000 sf office space in north/south nodes
- 400,000 sf research/lab in north/south nodes
- 300,000 sf warehouse/flex/light industrial in southern node
- 2 parking structures (1 north, 1 south)
- Overall northern node FAR of 0.15 and 25% impervious cover with 3-story and 1-story buildings
- Overall southern node FAR of 0.20, 25% impervious coverage with mostly 1-story buildings and few 3-story buildings

Scenario 2:

Modified Buildout with Hotel

The northern node of the PGIA is directly adjacent to Interstate 78 and is potentially a prime location for a hotel to be located between NYC and employment centers further to the south and west. This concept utilizes the buildout of developable parcels as in Scenario 1 with the substitution of a 300-room hotel to be located on the large vacant site in the O-R Zone adjacent to the highway interchange. The O-R zone regulations would need to be amended to permit this use and provide standards for it.

- 350-room, 5-story hotel w/ conf. facilities, restaurant, retail, parking structure
- 200,000 sf research/lab in northern & southern nodes
- 100,000 sf office space in northern & southern nodes
- 300,000 sf warehouse/flex in southern node
- Hotel node FAR of 0.20, 15% impervious
- Northern node FAR of 0.15, 35% impervious w/ mostly 1-2 story research buildings
- Southern node FAR of 0.20 with 25% impervious w/ mostly 1-story flex buildings

Scenario 3:

Modified Mixed-Use

This type of development promotes a variety of nonresidential uses, including diverse retail and office uses, in place of existing office buildings and existing undeveloped sites within the northern node. The more recently-constructed research buildings of the southern nodes would be retained with enhanced roadway and intersection capacity. Other focus areas include enhanced pedestrian connectivity for safe access between distinct sites. Surface parking lots would be discouraged in favor of on-street and structured parking. Though there is no public transit in the vicinity, the mix of uses and increased amenities will attempt to limit car trips for employees, visitors, and nearby residents.

- 600-700,000 square feet of office space, 300-350,000 square feet of retail in 3-4 story buildings in new mixed-use developments in northern portion of PGIA
- Site FAR of 0.35, impervious coverage 50%
- 2 parking structures in northern node to increase open space
- Southern node: 75,000 square feet of office space, 250,000 to 300,000 square feet of warehouse/flex/light industrial
- Southern node FAR 0.15, impervious coverage 20% including mostly 1-story buildings

Multimodal Transportation Improvements

Transportation improvement recommendations focus on opportunities to enhance roadway connectivity and improve access between properties throughout the PGIA. These improvements would alleviate capacity constraints along the primary roadway through the corridor (County Road 651), improve access for all modes, and address issues caused by the limited existing roadway network in the area.

Several proposed new roadway links would enhance access to the central node of the PGIA. A proposed new road would provide access from the west and King George Road. Other proposed links on the

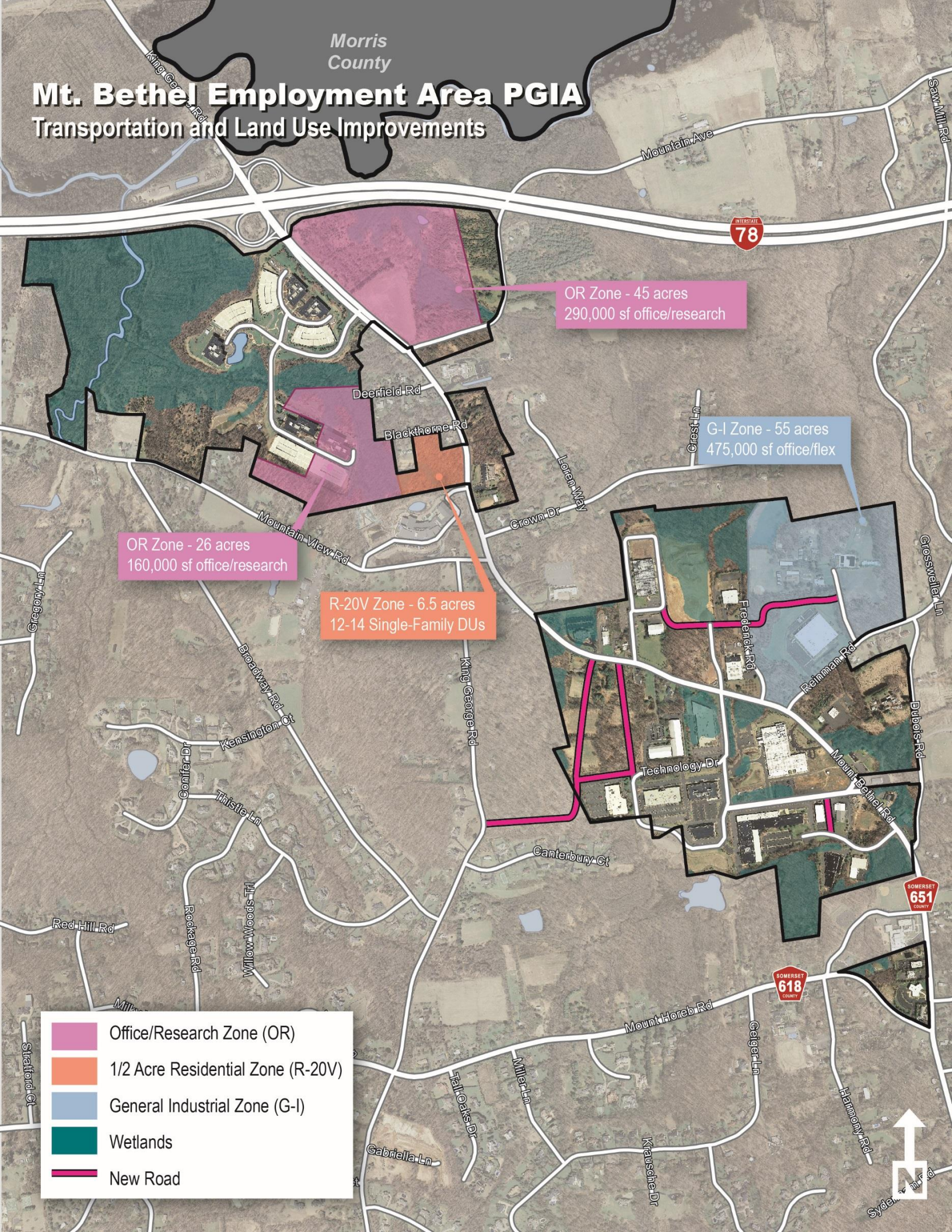
west/south side of County Road 651 provide additional access points to CR 651, and improve internal circulation and cross access. On the east side of CR 651, a proposed new road provides a parallel route to CR 651, enhancing internal circulation and access from Reinman Road.

Wetlands are a major constraint to additional access and roadway network improvements for the PGIA. The northern node of the PGIA, in particular, has extensive wetland areas that preclude additional access improvements without extensive mitigation measures.

Morris County

Mt. Bethel Employment Area PGIA

Transportation and Land Use Improvements



OR Zone - 45 acres
290,000 sf office/research

G-I Zone - 55 acres
475,000 sf office/flex

OR Zone - 26 acres
160,000 sf office/research

R-20V Zone - 6.5 acres
12-14 Single-Family DUs

- Office/Research Zone (OR)
- 1/2 Acre Residential Zone (R-20V)
- General Industrial Zone (G-I)
- Wetlands
- New Road



Estimated Economic Impacts

	Scenario 1	Scenario 2	Scenario 3
Development Type	Total Square Footage	Total Square Footage	Total Square Footage
Hotel	-	322,000	-
Health Care Office/Lab	400,000	200,000	-
Apartment Housing	-	-	-
Prof Office	200,000	100,000	725,000
Retail/Store	-	-	243,750
Retail/Restaurant	-	-	81,250

Assumptions:

Retail is 75% stores and 25% restaurants; Hotel rooms are calculated at 920 SF per room

Single-family detached residential not included

Data not available for estimating warehouse/flex/light industrial impacts in Scenarios 1, 2, and 3.

Economic Impact of Scenario 1: Existing Zoning Buildout

	Geographical Level of Impacts		
	Somerset County	NJTPA	New Jersey
Direct employment	1,290	1,290	1,290
Total employment	2,232	2,746	2,757
Personal income (millions \$)	\$162.78	\$193.16	\$193.74
Business activity (millions \$)	\$351.14	\$434.93	\$436.90
State and Local Taxes (millions \$)	\$15.64	\$20.89	\$21.00
Federal Tax Revenue (millions \$)	\$37.74	\$42.34	\$42.50
Total Tax Revenue (millions \$)	\$50.38	\$63.23	\$63.49

Economic Impact of Scenario 2: Modified Buildout with Hotel

	Geographical Level of Impacts		
	Somerset County	NJTPA	New Jersey
Direct employment	800	800	800
Total employment	1,349	1,646	1,653
Personal income (millions \$)	\$91.49	\$109.11	\$109.47
Business activity (millions \$)	\$207.91	\$256.49	\$257.69
State and Local Taxes (millions \$)	\$10.40	\$13.44	\$13.50
Federal Tax Revenue (millions \$)	\$20.00	\$24.40	\$24.50
Total Tax Revenue (millions \$)	\$30.40	\$37.84	\$38.00

Economic Impact of Scenario 3: Modified Mixed-Use

	Geographical Level of Impacts		
	Somerset County	Somerset County	Somerset County
Direct employment	2,024	2,024	2,024
Total employment	3,159	3,850	3,862
Personal income (millions \$)	\$220.12	\$260.00	\$260.61
Business activity (millions \$)	\$483.43	\$592.72	\$594.66
State and Local Taxes (millions \$)	\$26.17	\$33.22	\$33.33
Federal Tax Revenue (millions \$)	\$49.94	\$59.96	\$60.12
Total Tax Revenue (millions \$)	\$76.12	\$93.18	\$93.45

IMPORTANT NOTE: Maximized economic impacts: Impacts at full-build out/occupancy, and all workers are new to NJ (not relocated from elsewhere in the state or NJTPA region)

Model: IMPLAN multi-regional input-output model incorporating Somerset County, NJTPA region and NJ State areas.



Description

Location / Watchung, NJ

U.S. Route 22 West of Bonnie Burn Road
Portions of Blocks 5701, 5702, 5703, 5801, 5901, 6001, 6101, 6201, 6301, 6402, 6404

Acreage / Approx. 259

Existing Uses

Highway commercial, including shopping centers

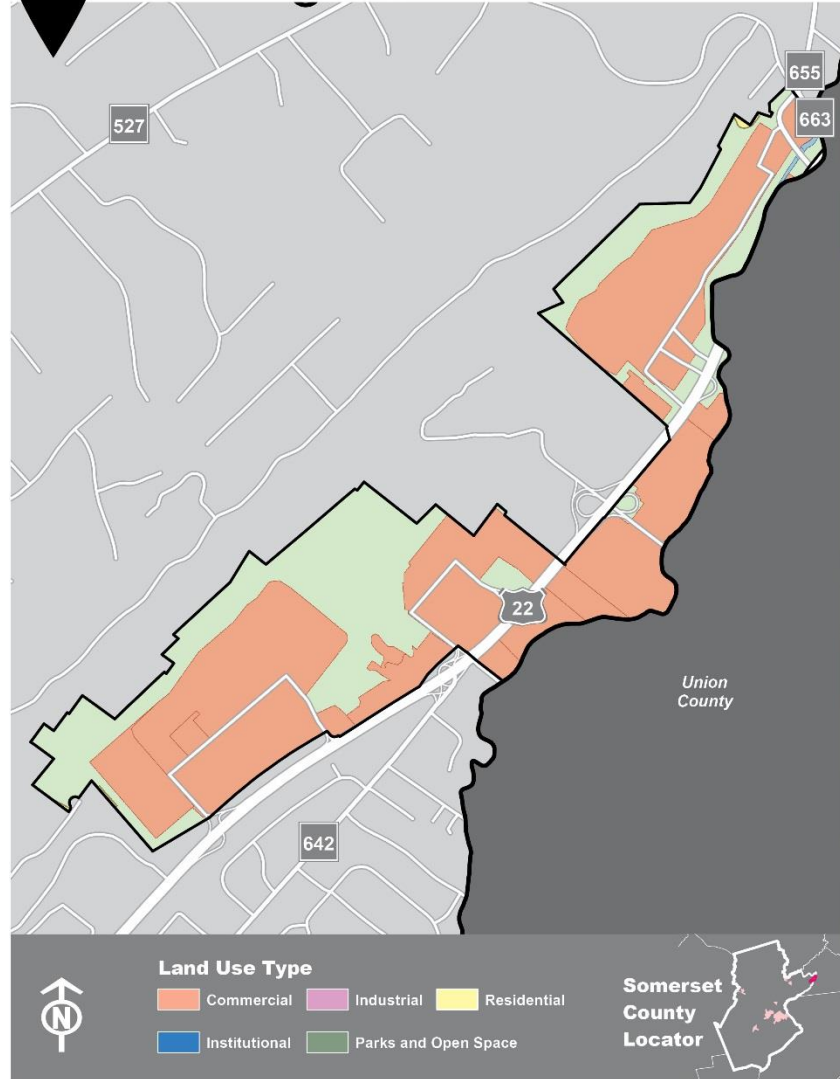
Current Zoning

B-C Highway Commercial (retail, office, restaurant), H-D Highway Development (office, shopping center, retail)

PGIA Summary

The PGIA consists of over 259 acres on both the north and south sides of U.S. Route 22 of primarily commercial properties. The more recently developed Watchung Square Mall is located in the western third of the PGIA; while the scenario analysis does not include this site, connectivity between this mall and surrounding properties is a priority. Reuse and infill of currently underutilized or vacant retail properties (such as the Sears site on U.S. Route 22 East) would provide the most redevelopment potential

PGIA Map



Multi-Modal Access Metrics

NJ TRANSIT Access



LIMITED NJ TRANSIT
BUS AND RAIL SERVICE

Network Walking Reach



SLIGHTLY
WALKABLE

Access Summary

Multi-modal access metrics indicate an auto-centric environment. There are existing NJ TRANSIT bus stops along U.S. Route 22 accessible from portions of the PGIA, and the eastern fringe is within one mile of the Netherwood rail station. The PGIA is 'slightly walkable' due to limited roadway connectivity and a lack of cross access and alternative routes to U.S. Route 22. The limited connectivity also contributes to high levels of congestion, high traffic volumes, and a challenging environment for bicyclists. A detailed analysis of the transportation infrastructure can be found in Technical Memorandum 4.

Strength

S

- Direct access to the regional highway network (U.S. Route 22)
- High median income in surrounding area
- Proximate to NJ TRANSIT bus service along U.S. Route 22 and NJ Route 28

Weakness

W

- Auto-centric access
- Minimal existing sidewalk infrastructure
- Connectivity and density of the existing roadway network is not conducive to walking
- Stressful environment for cycling and walking
- U.S. Route 22 is a barrier to north/south mobility
- High traffic congestion & crash rate along U.S. Route 22

Opportunity

O

- Capacity for large amount of retail and office
- The PGIA is adjacent to Plainfield, which is relatively dense and has a robust local roadway network
- Potential for one or more pedestrian-only connections to adjacent residential areas

Constraint

C

- Contains 6 contaminated sites
- Topography precludes PGIA access from the northwest
- The Green Brook and its associated flood plain limits access and development opportunities from the southeast
- Wetlands limit opportunities to construct roadway connections and provide cross access between existing large retail plazas in the southern portion of the PGIA

Scenario 1:

Existing Zoning Buildout

The current zoning permits a variety of commercial uses, including retail shopping centers, offices, restaurants, and stand-alone retail stores. The eastern two-thirds of the site, located in the B-C and H-D zones, have the capacity for a large amount of retail and office uses, depending on market conditions. Redevelopment should involve shared parking or reduced requirements to minimize impervious coverage and discourage large, underutilized parking areas in the front setback area. Connectivity within and between different parcels is also prioritized.

- Retail w/ small amount of office space in B-C zone; shopping center retail, hotel, some office in H-D zone
- 250,000 sf office space (2nd floor in B-C zone)
- 1.25 million sf retail, including shopping center
- 225 hotel rooms
- Shared parking (10%)
- Room for 6,000+ parking spaces due to lenient zoning (75-80% impervious permitted), plus a parking structure
- Site FAR approx. 0.33; 70% impervious

Scenario 2:

Mixed-Use, Primarily Retail

Office and retail uses are currently permitted in this zone, and a mixed-used concept including both is possible with an increase in permitted density. Two-story buildings would feature a mix of upper-floor professional offices and ground-floor retail spaces. This mix of uses would reduce peak hour parking need, presenting an opportunity for shared parking to minimize impervious surfaces. The site should feature enhanced pedestrian connectivity between buildings and potentially the existing retail development to the south.

- Generally 2-story buildings with retail on ground floor, office above
- 2.5 million sf total: More square footage due to increased building heights, but reduced overall coverage
- 750,000 – 1 million sf office/flex space
- 1.5 million sf retail
- 250 hotel rooms
- Shared parking (25% of office) between retail and office spaces, remainder in 3 parking structures
- Site FAR approx. 0.50; 60% impervious

Scenario 3:

Mixed-Use with Residential

This scenario assumes the development of a limited amount of multifamily housing in the existing Affordable Housing Overlay Zone in a portion of the PGIA. Incorporating residential uses on this site and an adjacent property in the same overlay zone just outside the PGIA would add to the mix of uses, and complement the retail and office uses of scenario 2. Connectivity between commercial and residential developments would be beneficial for residents and businesses.

- 2-3 story buildings for mixed-use concept in some locations with retail on ground floor and office space above
- 700,000 sf office space
- 1.75 million sf retail space
- 450 hotel rooms
- Approx. 80 residential units in existing Affordable Housing Overlay zone
- Shared parking (35% of office), remainder partially structured
- Site FAR approx. 0.50; 55-60% impervious

Multimodal Transportation Improvements

Transportation improvement recommendations focus on enhancing connectivity and access between properties along this narrow commercial corridor. These improvements would alleviate reliance on U.S. Route 22 as the sole means of circulation among adjacent properties and divert these short trips from the congested corridor. Driveway consolidation through shared and cross access arrangements along the corridor would reduce the number of conflict points caused by entry/exit movements and have a positive impact on traffic flow and safety.

Within the focus area along the south side of U.S. Route 22, redevelopment should include an internal circulation roadway linking the adjacent parcels, promoting cross access and shared parking. Access to U.S. Route 22 should be consolidated to minimize driveway openings and relocate access farther from the Terrill Road intersection. The southern side of the focal area abuts the Green Brook and residential neighborhoods of North Plainfield. Identifying priority locations and constructing bicycle/pedestrian-only connections would tie into the existing street grid of North Plainfield and encourage bicycle and pedestrian access between the commercial redevelopment area and surrounding residential neighborhood. Redevelopment within the PGIA should include bicycle and

pedestrian facilities to tie into this network.

Towards the western end of the PGIA, a proposed connector road would link the Watchung Square Mall and with the retail plaza to the east, diverting trips from U.S. Route 22. However, wetlands and slope issues may require significant mitigation measures. Additionally, there are opportunities to improve rear and cross access for properties fronting U.S. Route 22, allowing driveway consolidation. Several of the driveways that could be closed are immediately adjacent to the intersection of U.S. Route 22 and Mountain Avenue, where a large crash cluster was identified in the existing conditions analysis. At the western end of the PGIA, opportunities exist for enhanced pedestrian and/or vehicular connections between the Watchung Square Mall and adjacent multi-family residential development.

A complete sidewalk network along U.S. Route 22 would improve access to existing bus stops, and allow pedestrian mobility along the corridor.

Long-term improvements to the U.S. Route 22 corridor should also be investigated to alleviate congestion and improve safety, such as intersection improvements at Mountain Avenue (CR 642).

Watchung Rt 22 Corridor PGIA

Transportation and Land Use Improvements

-  Existing Road
-  Proposed New Developer Road
-  Potential Bike/Ped Connection
-  PGIA Boundary
-  Focus Redevelopment Area
-  Wetlands

Corridor study to examine opportunities to alleviate congestion and improve safety.

Internal circulation within new development consolidates driveways and provides shared access to US 22, ensures cross access among adjoining properties, and provides pedestrian accommodations.

Provide sidewalks along US 22 and connections to PGIA properties to improve transit and pedestrian access.

Investigate providing rear/cross access, consolidate US 22 access.

New connector road; Possible wetlands and topology constraints.

Investigate opportunities for improved vehicular and/or bike/ped connections.

Study to investigate intersection improvements.

Investigate opportunities for bike/ped connections.



Estimated Economic Impacts

	Scenario 1	Scenario 2	Scenario 3
Development Type	Total Square Footage	Total Square Footage	Total Square Footage
Hotel	207,000	230,000	414,000
Health Care Office/Lab	-	-	-
Apartment Housing	-	-	96,000
Prof Office	250,000	875,000	700,000
Retail/Store	937,500	1,125,000	1,312,500
Retail/Restaurant	312,500	375,000	437,500

Assumptions:

Retail is 75% stores and 25% restaurants

Hotel rooms are calculated at 920 SF per room

Residential is 100% apartment/condo/townhouse and is calculated at 1200 SF per unit

Economic Impact of Scenario 1: Existing Zoning Buildout

	Geographical Level of Impacts		
	Somerset County	NJTPA	New Jersey
Direct employment	2,012	2,021	2,021
Total employment	2,872	3,382	3,392
Personal income (millions \$)	\$151.88	\$181.49	\$182.05
Business activity (millions \$)	\$345.94	\$427.58	\$429.44
State and Local Taxes (millions \$)	\$26.49	\$31.70	\$31.81
Federal Tax Revenue (millions \$)	\$35.01	\$42.45	\$42.59
Total Tax Revenue (millions \$)	\$61.50	\$74.15	\$74.41

Economic Impact of Scenario 2: Mixed-Use, Primarily Retail

	Geographical Level of Impacts		
	Somerset County	NJTPA	New Jersey
Direct employment	3,744	3,744	3,744
Total employment	5,569	6,671	6,691
Personal income (millions \$)	\$340.51	\$404.30	\$405.38
Business activity (millions \$)	\$760.80	\$936.08	\$939.60
State and Local Taxes (millions \$)	\$48.82	\$60.07	\$60.28
Federal Tax Revenue (millions \$)	\$77.82	\$93.84	\$94.13
Total Tax Revenue (millions \$)	\$126.64	\$153.91	\$154.40

Economic Impact of Scenario 3: Mixed-Use with Residential

	Geographical Level of Impacts		
	Somerset County	Somerset County	Somerset County
Direct employment	3,721	3,721	3,721
Total employment	5,443	6,477	6,497
Personal income (millions \$)	\$314.69	\$374.65	\$375.72
Business activity (millions \$)	\$711.85	\$876.80	\$880.29
State and Local Taxes (millions \$)	\$48.68	\$59.24	\$59.45
Federal Tax Revenue (millions \$)	\$72.24	\$87.29	\$87.57
Total Tax Revenue (millions \$)	\$120.92	\$146.54	\$147.02

IMPORTANT NOTE: Maximized economic impacts: Impacts at full-build out/occupancy, and all workers are new to NJ (not relocated from elsewhere in the state or NJTPA region)

Model: IMPLAN multi-regional input-output model incorporating Somerset County, NJTPA region and NJ State areas.

7 | Implementation Matrix

The implementation matrix details the recommended transportation improvements at each of the PGIAs. For each recommendation the matrix indicates the time frame for implementation, the organization(s) responsible for the proposed improvement, and an estimated order-of-magnitude cost.

Adoption of a Complete Streets Policy is recommended for each of the PGIA host municipalities, with the exception of Hillsborough, which adopted its policy on April 22, 2014.

Improvement	Order of Magnitude Cost (Est.)	Time Frame	Responsibility
RVCC / Easton Turnpike PGIA			
Construct new internal spine roadway to support new development opportunities	Med	Varies	Town, Developer
Construct new roadway segments to improve network connectivity	Med	Varies	Town, Developer
Construct roundabout along RVCC Drive at intersection with new roadway	Med	Varies	County, Town, Developer
Consolidate access along U.S. Route 22	Low	Long	NJDOT, Town, Developer
Provide cross access, shared parking, and pedestrian circulation for any new development	Low	Long	Developer
Stripe bicycle lanes along Reading Road (CR 637) and Easton Turnpike (CR 614)	Low	Med	County
Construct sidewalks and high visibility crossing treatments throughout the PGIA	Low	Long	Town, Developer
Construct sidewalk to fill gaps in the network along Easton Turnpike (CR 614) between the PGIA and the North Branch hamlet	Low	Med	Town, Developer
Construct shared-use paths connecting the RVCC campus to Easton Turnpike (CR 614)	Low	Med	RVCC, Town
Adopt Complete Streets policy	Low	Short	Town

Improvement	Order of Magnitude Cost (Est.)	Time Frame	Responsibility
Chimney Rock Interchange PGIA			
Create internal roadway network within the PGIA to support new development opportunities	Med	Varies	Developer, Town
Provide pedestrian facilities and connected network throughout the PGIA, including connections between the PGIA and new interchange	Low	Long	Developer, Town
Investigate opportunities to connect Frontier Road to Foothill Road	Low	Long	Town
Investigate opportunities for bike/ped connection across Middle Brook	Low	Long	Developer, Town
Fill sidewalk gaps along Chimney Rock Road	Low	Long	Developer, Town
Adopt Complete Streets policy	Low	Short	Town
I-287 Industrial Complex PGIA			
Investigate improvements to roadway network connectivity to support new development opportunities	Low	Varies	County, Town, Developer
Stripe bicycle lanes along Elizabeth Road, Davidson Avenue, Pierce Street, and New Brunswick Road	Low	Med	County, Town
Create pedestrian sidewalk network throughout PGIA	Low	Long	Town, Developer
Adopt Complete Streets policy	Low	Short	Town
Create Ad Hoc Committee for Economic Development to assist and advise the municipality on development and redevelopment opportunities	Low	Short	Town
Hillsborough Town Center PGIA			
Construct additional roadway network, per the "Transit Ready Development District and Circulation Plan Update", to support new development opportunities	Med	Varies	Town, Developer
Repurpose existing U.S. Route 206 as a "main street". Per the "Transit Ready Development District and Circulation Plan Update," reconfigure as a boulevard with one travel lane in each direction, turn lanes, bike lanes, on-street parking, and a landscaped median. Reduce the speed limit to 25 mph.	Med	Long	NJDOT, Town
Per the "Transit Ready Development District and Circulation Plan Update," reconfigure CR 514 (Amwell Road) as a boulevard with two travel lanes in both direction and landscaped median, with a wide grass buffer and shared-use paths along both sides.	Med	Long	County, Town

Improvement	Order of Magnitude Cost (Est.)	Time Frame	Responsibility
Investigate bus service to the PGIA and the U.S. Route 206 corridor	Low	Long	NJ TRANSIT, Town
Investigate reactivation of the West Trenton Line	Low	Long	NJ TRANSIT, Ridewise, County, Town
Install gateway treatments along U.S. Route 206 entering the PGIA	Low	Long	State, Town
Investigate road diet and bike lanes along Raider Blvd/Auten Road	Low	Long	Town
Manville Town Center PGIA			
Construct new street network within Rustic Mall redevelopment area, connected to existing municipal street grid to support new development opportunities	Med	Varies	Developer
Construct 2 roundabouts and install curb extensions throughout Rustic Mall redevelopment area to provide traffic calming	Low	Varies	Developer
Construct complete sidewalk network, including pedestrian alleyways throughout Rustic Mall redevelopment area	Low	Long	Developer
Construct broad sidewalks with pedestrian amenities (lighting, street furniture, street lights) through the center of the Rustic Mall redevelopment area	Low	Long	Developer
Install high visibility pedestrian crosswalk striping throughout Rustic Mall redevelopment area	Low	Long	Developer
Formalize and consolidate rear access points to South Main Street businesses and construct rear curbed parking lot with shared and cross access	Low	Long	Developer / Borough
Adopt Complete Streets policy	Low	Short	Borough
Mt. Bethel Employment Area PGIA			
Investigate improvements to roadway network connectivity to support new development opportunities	Low	Varies	County, Town, Developer
Create pedestrian sidewalk network throughout PGIA	Low	Long	Town, Developer
Provide cross access, shared parking, and pedestrian circulation for any new development	Low	Long	Developer
Adopt Complete Streets policy	Low	Short	Town

Improvement	Order of Magnitude Cost (Est.)	Time Frame	Responsibility
Watchung Rt. 22 Corridor PGIA			
Investigate improvements to roadway network connectivity to support new development opportunities	Low	Varies	NJDOT, Borough, Developer
Consolidate access along U.S. Route 22	Low	Long	NJDOT, Borough, Developer
Provide cross access, shared parking, and pedestrian circulation for any new development	Low	Long	Developer
Conduct detailed intersection analysis for U.S. Route 22 at Mountain Avenue to potential improvements for safety and traffic flow	Low	Long	NJDOT
Investigate opportunities for improved bicycle and pedestrian circulation to the PGIA from North Plainfield and identify priority location(s) for pre-fabricated bike/ped structures over the Green Brook	Low	Long	Borough
Investigate opportunities for improved bicycle and pedestrian and/or vehicular access to the PGIA from the south along East Drive and Crystal Ridge Drive	Low	Long	Borough, Developer
Adopt Complete Streets policy	Low	Short	Borough

NOTE:

Order of Magnitude Cost tiers:

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

Varies indicates that proposed improvement takes places as development moves forward.

Time Frame tiers:

- Short: <1 year
- Med: 2-3 years
- Long: >3 years

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