

Monroe Township

Master Plan

Monroe Township, New Jersey

October 2022

2022 Monroe Township Master Plan

Adopted by the Monroe Township Planning Board
on October 27, 2022

Administered by the
Monroe Township Planning Board

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INTRODUCTION

Why Make a Plan?

Monroe Township is a historically rural and agricultural community that balances its past agricultural development with increasing suburbanization due to its convenient location in the state and region. This balance has manifested itself in the form of large residential developments, several active adult communities, an excellent system of schools, transportation networks and plentiful open space and recreational opportunities. Even now, the Township continues to work with its county, regional and state partners to expand on its assets to increase the quality of life for its residents.

Monroe Township residents have excellent access to major regional commuting corridors, I-95, Route 33, and Route 130, which attract families and seniors looking to be close to New York and other major centers of employment and culture but wanting a more laid-back lifestyle. Given the community's suburban built environment, the tax base is primarily made up of residential taxpayers with light industrial, commercial, and office uses scattered throughout the Township with the majority of these more intense uses being located along major access roadways on the western half of the municipality.

The Township has experienced exceptional growth and development pressures in recent years that warrant a fresh look at the Township's Master Plan. Residential development, both age-restricted and market rate housing, has expanded tremendously in the past ten to twenty years due to the Township's

location and availability of developable land. More recently, residential development has occurred as a result of the Township's affordable housing settlement. Monroe's central location and access to major transportation systems has also attracted the development of warehousing and logistics centers, which have grown in demand due to the exponential growth of e-commerce. This trend has brought both benefits in the form of a more diversified tax base and challenges such as growing traffic on major roadways. All of this recent development has transformed the community from a mix of rural and suburban development to a more suburban community that still retains areas of agricultural significance. The through line to this update to Monroe Township's master plan is to create a balance of all these varying needs while maintaining the high-quality quality of life that Township residents expect.

Other external forces such as the economic and land use development trends brought on by the COVID-19 pandemic and affordable housing mandates, require close examination of modernizing future land use and development decision-making. Changing housing and shopping preferences and an aging population are additional factors to consider when updating the Township's land use policies. There are opportunities to provide high quality circulation and open space improvements that can accompany the new housing units that will need to be developed as mandated by the Township's affordable housing settlement agreement. Mixed-use Residential/Commercial development in appropriately targeted locations can also provide

living spaces that meet modern preferences, while simultaneously providing a “Town Center” area of Monroe that attracts residents and visitors to these locations. Still, there is recognition that residents have concerns about overdevelopment and the loss of the Township’s open spaces and farmland, and as a result, any development or redevelopment should be mindful of community character and the characteristics of why people wanted to live in the Township in the first place.

This new Master Plan guides planning and decision-making for the important aspects of a high quality of life in the Township - appropriate land use; quality transportation infrastructure for pedestrians, bicyclists, transit users, and motorists; preservation of the Township’s remaining farmland while balancing modern development trends; access to quality parks and open spaces as well as community facilities including schools, parks, emergency services and others; and strategic economic growth in commercial and light industrial areas. The Master Plan addresses these topics as it seeks to build on the community’s assets, identifying strategies to address ongoing issues and opportunities, while positioning Monroe Township to continue to be a desirable place to live, work, and visit for the next 10 years and beyond. Further, the new Master Plan gives the community the legal basis for control over future development, as well as land use planning policy and serves as the basis for the Zoning Ordinance.

Authority

The Township of Monroe adopted its last Master Plan in 2011 and conducted a Re-examination of the Master Plan in 2009 and 2020. In accordance with the Municipal Land Use Law (MLUL), Monroe Township updated the Master Plan as required every 10 years. This 2022 Master Plan is in accordance with the New Jersey statute.



Planning Process

This document, as mentioned earlier, included a robust public outreach process (explained in more detail in the **Community Engagement and Public Participation** section of this report). In addition to this was an extensive review of planning materials. Plans and studies prepared by Monroe Township and reviewed as part of this Master Plan effort include:

- 2003 Master Plan
- 2009 Master Plan Reexamination Report
- 2011 Master Plan
- 2016 Fair Share Housing Plan
- 2017 Master Plan Amendment
- 2020 Environmental Resource Inventory
- 2020 Master Plan Reexamination Report
- Monroe Township Zoning Ordinance

In addition to reviewing the abovementioned planning materials drafted by Monroe Township, other plans in the region and the state were reviewed. They are discussed under the **Relationship to Other Plans** section of this report.

Plan Implementation

The Master Plan is a guiding document for multi-disciplinary planning and investment in the Monroe Township for the next 10+ years. Master Plans are recognized as evolving documents and may be amended by the municipal Planning Board at any time to fit current trends or changed circumstances. In 10 years, the Planning Board must pursue either a Master Plan Reexamination Report or may choose to undertake a new comprehensive Master Plan.

The Master Plan is built on prior planning efforts and initiatives, a comprehensive analysis of existing conditions, and future opportunities. The recommendations result from an analysis of existing conditions and recognition of future opportunities are included in a checklist format at the conclusion of each Element. These recommendation checklists are designed for the purpose of “checking off” or tracking recommendations over the next 10-year period as a way to measure progress. Each recommendation is supplemented with four features:

- **Recommendation** states the recommendation.
- **Responsible Party or Partner** identifies the Township entities or other agencies that will have a role in implementation.
- **Timeframe** estimates the amount of time to implement the item. It is categorized as either short-term (1-2 years), mid-term (2 to 5 years), long-term (5-10+ years), or ongoing (continuous).
- **“Check off” box** is a blank box for the Planning Board to “check off” the recommendation once completed. The Planning Board is also encouraged to provide a date of completion.

Element Recommendation Plan

<i>Recommendation</i>	<i>Implementing Party</i>	<i>Timeframe</i>	<i>Completed</i>	<i>Year Completed</i>
Recommendation Category				
1 Element Recommendation	Township and/or partner	Short Medium Long Ongoing	✓	Insert Year

Plan Organization

The Master Plan is organized into the following Elements:

Introduction explains the purpose of the Master Plan, the source of its authority from the New Jersey statutes, direction on how to implement the recommendations resulting from this Master Plan, and Monroe Township's overall vision statement, goals, and objectives.

Background discusses Township-wide demographic trends and the relationship of the Township to relevant planning documents and studies.

Community Engagement discusses the importance of community engagement in the planning process and summarizes the public outreach activities that occurred for this Master Plan including meetings of the project steering committee, public workshops, public survey, use of PublicInput.com, and the draft plan review process.

All Elements provide a checklist of recommendations; a discussion of planning trends and policies affecting the element topic; and a discussion of planning-related issues.

Land Use Element addresses community form and land development of Monroe. This element forms the basis of decision making related to zoning and planning permitted uses and development standards in the Township. The Land Use element incorporates a vulnerability analysis that highlights the Township's vulnerabilities to natural hazards and makes mitigation recommendations.

Circulation Element provides a multi-modal review of the Township's transportation network. This element addresses the needs of pedestrians, bicyclists, transit users, and motorists, addressing more specific issues such as freight traffic.

Open Space, Parks and Recreation Element identifies physical and programmatic improvements to Monroe's parks and trail facilities while improving recreational opportunities.

Public Infrastructure and Utility Element provides an analysis of the Township's existing infrastructure and plan for future improvements to meet demand from future development.

Recycling Element examines current and ongoing recycling initiatives.

Appendices include a Master Plan Public Engagement Survey Report and associated Public Outreach documents (i.e. flyers, meeting summaries).

The Master Plan was conducted by the Monroe Township Planning Board with assistance from H2M Architects + Engineers, Sam Schwartz, and Leon Avakian, Inc.

Overall Goals & Objectives

In the Municipal Land Use Law, a Master Plan must include a “statement of objectives, principles, assumptions, policies, and standards upon which the constituent proposal for the physical, economic and social development of the municipality are based.” Through its goals and objectives statement, the Master Plan sets out a vision for the community in the coming years. The Monroe Township Master Plan expresses these statements as a set of goals for each element. These elements and their goals are described in the following pages.

LAND USE ELEMENT GOALS & OBJECTIVES

1. Achieve a balance of land use types that maintains and enhances the quality of life of the Township.

- a. Mix new growth in residential development with open space acquisition and preservation.
- b. Create linkages between different land uses.
- c. Update zoning regulations to ensure high quality and appropriate development.
- d. Maintain rural and agricultural development pattern in appropriate locations in line with the State Development and Redevelopment Plan.

2. Promote industrial development in appropriate areas of the Township.

- a. Encourage infill industrial development with the industrial park southwest of the 8A Turnpike interchange.
- b. Provide for additional industrial and corporate center growth along Route 33 and Cranbury – South River Road.
- c. Link future industrial development with transportation infrastructure.

3. Encourage appropriate commercial development in areas of population concentration and where existing infrastructure can accommodate.

- a. Incentivize high quality mixed-use development along Route 33 corridor.

- b. Update commercial zoning regulations to incentivize new commercial development in appropriate locations.
- c. Encourage a mix of commercial uses along commercial corridors.
- d. Consider redevelopment designations where appropriate.

4. Develop and implement policies that comprehensively address the needs of an aging population.

- a. Maintain affordability for senior residents on fixed incomes.
- b. Ensure all residents, and particularly seniors, have access to quality medical facilities, recreational facilities, and commercial opportunities.

5. Encourage redevelopment and infill development where it is feasible in Monroe to promote more efficient use of land and existing infrastructure.

- a. Consider redevelopment to improve streetscape and connections to residential areas.
- b. Pursue creating a walkable town center in Monroe.
- c. Update land use regulations to encourage growth in built-out areas of the Township.

6. Ensure that Monroe has in place sufficient strategies to minimize natural hazard risks and climate change vulnerability.

- a. Encourage energy efficient design and sustainable building practices.
- b. Encourage reduced carbon footprints through alternative fuel vehicle infrastructure and promoting alternative modes of transportation to minimize automobile travel.
- c. Maintain and enhance regulations that discourage unnecessary development in wetlands and flood hazard areas.
- d. Implement best practices in stormwater management.

Circulation Element Goals & Objectives

- 1. Adopt a Complete Streets Policy – State and County roadways are already covered by Complete Streets policies.**
 - a. Prepare streetscape standards for various categories of streets and roads for improving pedestrian, bicycle and vehicular safety and enhancing visual qualities.
- 2. Develop a multimodal transportation system that meets the transportation and recreational needs of residents.**
 - a. Prepare a comprehensive bicycle and pedestrian system, including bicycle lanes and walkways and their design standards for the entire municipality.
 - b. Create shared-use nature paths through the wetland areas paralleling Applegarth Road and Perrineville Road, from Union Valley Road to Route 33.
 - c. Create on-road and/or grade separated bicycle facilities to connect schools, the park and ride, retail areas, senior and community centers and open space – existing and proposed.
 - d. Develop safe multimodal routes across Route 33 to connect the southern part of the Township.
 - e. Evaluate the opportunity to utilize power line right of way for a trail.
 - f. Identify connection opportunities between residential developments.
- 3. Ensure a safe and efficient transportation system for Monroe residents and employers.**
 - a. Assess the traffic operations on Forsgate Drive, from the NJ Turnpike interchange to Railroad Avenue/Buckelew Avenue, including the intersection of Buckelew Avenue and CR 612/Pergola Avenue/Matchaponix Avenue.
 - b. Address the traffic operations on and around Applegarth Road.
 - c. Assess future traffic operations around the new housing developments.

- d. Identify corridors for traffic calming/speed reduction improvements.

Open Space Element Goals & Objectives

- 1. Continue the trend in open space acquisition, environmentally sensitive area preservation, and farmland preservation through various planning techniques with the goal of retaining 50% of the Township as preserved lands.**
 - a. Utilize State or County funding resources as to achieve the overall preservation goal.
 - b. Encourage clustered residential development in order to preserve woodlands and enhance overall development.
 - c. Protect wildlife and biodiversity as a part of preservation efforts.
- 2. Encourage a network of pedestrian greenways along stream corridors and bicycle paths which link residential neighborhoods with open space, community facilities and commercial areas.**
 - a. Create pedestrian and bicycle pathways throughout the municipality to achieve a complete network.
 - b. Utilize Complete Streets policies to promote multi-modal mobility.
 - c. Encourage new residential development to create walking and biking connections to surrounding uses.
- 3. Ensure quality and accessible recreational opportunities for residents of all ages.**
 - a. Create additional recreational opportunities for residents in the southern part of the Township.
 - b. Make age-appropriate improvements to Township owned parks based on the needs of nearby residents.
 - c. Maintain adequate levels of recreational opportunities for current and future population needs.
 - d. Create non-vehicular connections between

parks and residential areas.

- 4. Preserve and enhance rural character of certain areas of the Township, particularly the PA-4 Rural Planning Area in accordance with the State Plan.**
 - a. Protect unique agricultural resources by preserving prime agricultural lands through the Farmland Preservation Program and through the transfer of development rights.
 - b. Consider sites with historical features to become opportunities for education, placemaking, and preserving rural and historic character.

Utilities Element Goals & Objectives

- 1. Achieve coordination between the extension of utilities with the growth policies of the land use plan.**
- 2. Ensure the continued adherence to the Water Quality Accountability Act.**
- 3. Ensure that water infrastructure planning coincides with meeting future growth due to the statewide affordable housing mandate.**
- 4. Assure that all new developments are accompanied by a developer's agreement that the developer reimburses the Township with its fair share in funding for infrastructure capacity expansion.**
- 5. Prevent the contraction of the non-sewer service area of the Township.**
- 6. Continue to analyze the most effective and efficient means for providing adequate flow and fire pressure service in the Township.**

Recycling Element Goals & Objectives

- 1. Increase recycling levels in the Township that are consistent with statewide goals.**
- 2. Increase education and understanding of the importance of recycling and programs.**
- 3. Improve recycling by businesses in the Township.**

Background

Population Characteristics

The following discussion of Township demographic conditions relies largely on the latest available data at the time of this report, Census 2020 data, and as such, may not accurately reflect current conditions in the Township. Most current data, 2019 American Community Survey (ACS) 5-year Estimates data (collected from years 2015-2019), is used where possible instead of using Decennial Census data.

Since the preparation of the Township's last Master Plan and Reexamination Report documents, there have been significant changes to population demographics and other factors affecting how people live, work, travel, and play in the community. It is important to understand demographic conditions and population trends in order to better reflect the lifestyles of Monroe Township residents. Doing so helps identify and address growing problems or potential areas of concern which can help to comprehensively plan for Monroe's future. These unique population characteristics are identified by comparing the Monroe's demographics over time and to those of the county and the state.

Historic Development and Population Growth

Monroe Township has experienced a population boom starting around 1950 and accelerating at the turn of the twenty-first century with people attracted to its high quality of life, access to key transportation routes and excellent school system among several other factors. Monroe's population in the 2020 Census was 48,594 residents, which was a 24.2% increase from 2010 when the population was 39,132. The North

Jersey Transportation Planning Authority's (NJTPA) population forecast, performed after the 2010 Census, predicted that the total population of Monroe will continue to grow into the year 2045 to 50,332 residents. However, given the level of residential development experienced in the past decade and the number of new housing units required to meet the Township's state mandated affordable housing obligation, the population is likely to exceed the NJTPA's projected population number. Irrespective of the projected numbers or the actual growth realized, the expected continued population growth will likely require the need for a range of development activities, including additional housing, infrastructure, and transportation improvements in order to meet the needs of all current and future residents over the next twenty-plus years is essential.

Age

Monroe Township, with a significant number of active-adult communities, has an older population compared to both Middlesex County and New Jersey. In 2019, the median age of Township residents was 56.5 years old compared to 38.6 for the County and 39.9 for the State. In recent years, this trend has become more significant as the median age in 2010 was 53.5, representing an increase of three (3) years over the past decade. Thus an existing older population cohort that is continuing to age presents a significant planning challenge for the Township in the coming years. By breaking down the population by age cohort, the Township will have a better sense about what the needs are for current and future residents and enact policies to meet those needs. Policies may also need to be implemented that try to create a different mix of age cohorts to create a healthy community that involves all generations.

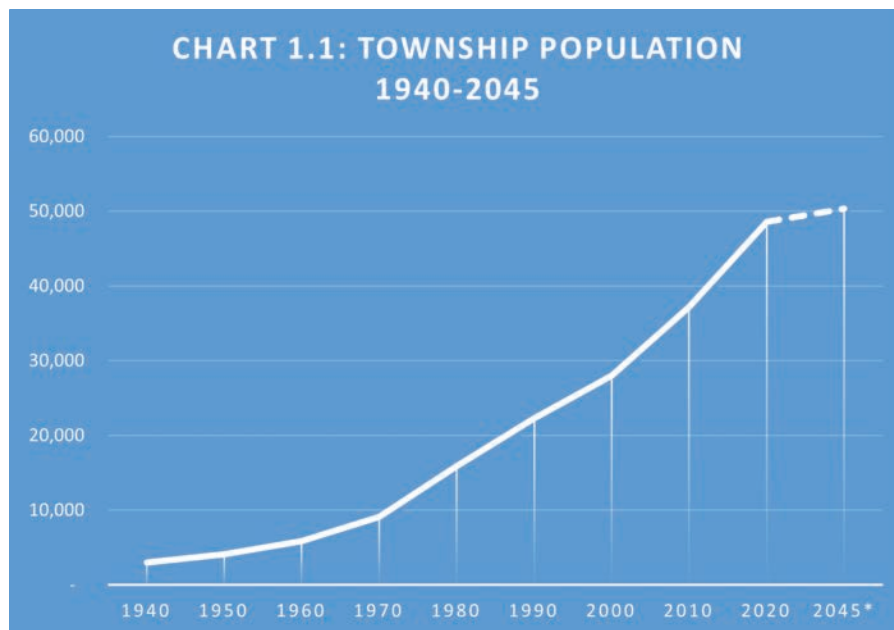


Chart 1.2: Monroe Age Pyramid, 2019

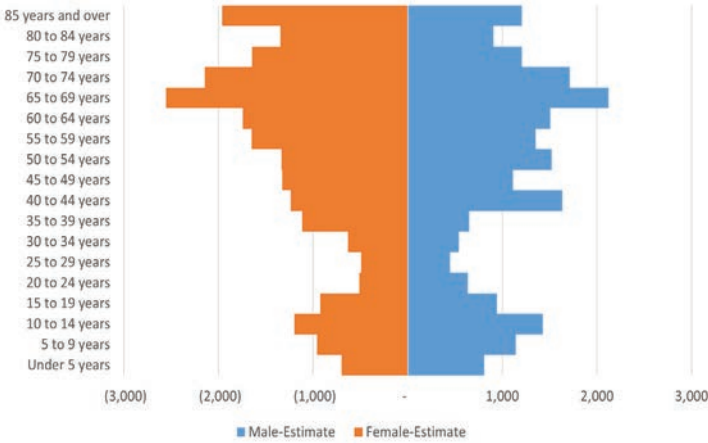
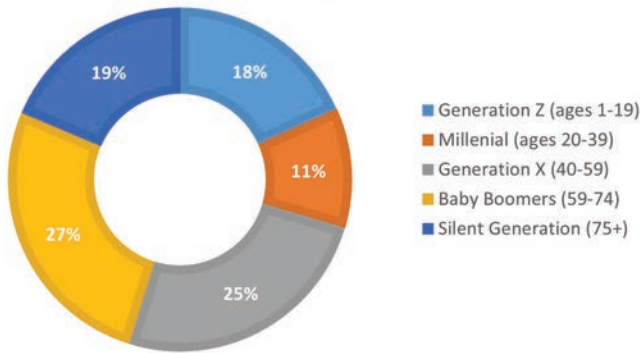


CHART 1.3: GENERATION BREAKDOWN, MONROE- 2019

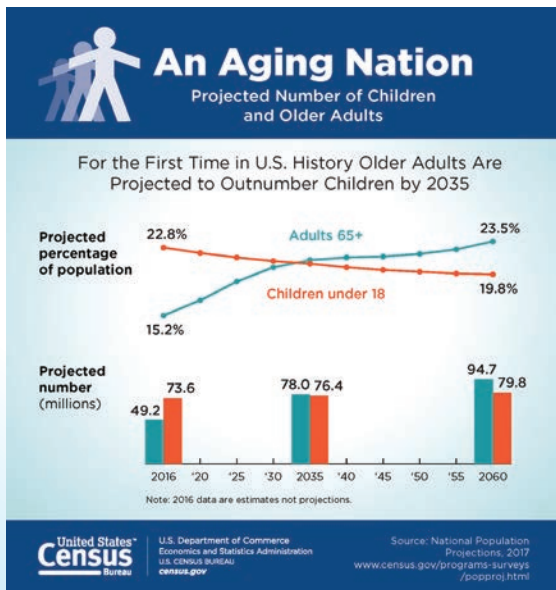


Millennials

The Millennial generation (generally, people born between 1980 and 2000) is the largest living generation of people in the United States. As of 2020, the ages of people in this generation range between 20 and 40 years old. While Millennials make up the largest portion of the national population, the story is a little different in Monroe Township. Millennials make up only about 11% of the population, lower than the national average of approximately 27% (2019, ACS). In 2019, the largest age cohort in Monroe was the Baby Boomer generation totaling at almost 27% of the population, while those aged 40 to 59 are close behind as the second largest age cohort in Monroe Township at about 25%. The core age group of Millennials, aged between 25 and 34, make up a very small portion of Monroe’s population. It can be concluded that Monroe’s population is heavily skewed towards the older population with a sizeable population under the age of 20. As a result, there are comparatively fewer Millennials living in Monroe compared to the nation as a whole.

Generally, Millennials living preferences include rental units, downtown amenities, and transit service. A 2014 Urban Land Institute (ULI) survey of Millennials found 50% are renters (635 of 1,270), and two-thirds of respondents reported they are very satisfied or satisfied with being a renter.¹ The ULI’s Millennial report also notes one-third rent in an urban area (419 of the 1,270 survey respondents). Roughly ten percent (9.65%) of occupied housing units in Monroe are renter occupied, which can help to explain why this age cohort makes up a comparatively small percentage of the Township’s population.

Millennials also tend to use public transportation and other modes at a higher rate than previous generations. In a survey of Millennials from the Rockefeller Foundation and Transportation for America², 54% of respondents said they would consider moving to another city if it had more and better transportation options, and two-thirds identified access to high quality transportation as one of their top three criteria when choosing a place to live. Eighty percent (80%) said that it is important to have a wide range of transportation options, such



¹ Lachman, M. Leanne, and Deborah L. Brett. Gen Y and Housing: What They Want and Where They Want It. Urban Land Institute, 2015. <http://uli.org/wp-content/uploads/ULI-Documents/Gen-Y-and-Housing.pdf>

² Goldberg, David. "The Rockefeller Foundation Millennials Survey." Transportation for America. April 22, 2014. <http://t4america.org/2014/04/22/survey-to-recruit-and-keep-millennials-give-them-walkable-places-with-good-transit-and-other-options>.

as public transportation, bike- and car-sharing, and pedestrian-friendly streets.

However, as this generation ages, these preferences could change. A more recent report published by the ULI in 2020 acknowledged that the millennial generation is now reaching a demographic tipping point with many members of this generation entering into peak child rearing years with roughly half (47.6%) of millennial households having children.³ Conversely, home-ownership rates households between the ages of 25 and 34 (40.3%) remains far below the rate before the Great Recession (49.9% in 2005). The rate for the slightly older age cohort (59.8%), those between 35 and 44, is also well below pre-Great Recession rate (70% in 2005).⁴ As a predominantly owner-occupied, single-family community, Monroe Township appears to be attracting growth tailored towards a different market segment from the typical member of the Millennial Generation. However, the anticipated growth that is coming to the Township in the coming years appears to be in line with targeting the growing number of Millennial households with children.

It remains somewhat unclear how the preferences of the Millennial generation will change over time. Some of their preferences may be more influenced by financial considerations. The national average student-loan debt for a person who graduated in 2019 is \$28,950, one (1) percent higher than the 2016 average. However, the New Jersey state average student loan debt for a graduate of the Class of 2019 is \$33,566, 7th highest in the nation.⁵ The higher than average debts may impact a person's ability to afford a car, save for a down payment on a home, or start a family. For example, the US Census Bureau found that young adults are marrying at lower rates than previous generations, marrying on average between 28 and 30 years old and economic security plays a role in marital decisions.⁶ As Millennials' incomes increase, they marry and start a family, and save more money, the question remains on whether Millennials will continue to prefer to rent and eschew car ownership, or whether they will look to move to more suburban areas to own homes and drive an automobile to work. One potential scenario is that Millennials with children will choose to rent in suburban communities to take advantage of the school system and other recreational amenities. This dynamic is something that the Township should monitor as attempts to meet the demand profile of this generation.

³ Ducker, Adam, Jack Ross and Matthew Harrop. Family Renter Housing: A Response to the Changing Growth Dynamics of the Next Decade. Urban Land Institute, 2020. <https://knowledge.uli.org/en/Reports/Research%20Reports/2020/Family%20Renter%20Housing>

⁴ Ducker, Adam et al.

⁵ <https://ticas.org/posd/home>

⁶ <https://www.census.gov/newsroom/press-releases/2018/families.html>

Baby Boomers

The baby boomer generation is the second largest generation of living people in the United States (generally people born between 1946 and 1964). In Monroe, baby boomers make up 27% of the population, which is higher than the national average of approximately 21.2% (2019, ACS). By the year 2030, all baby boomers will have reached the typical age of retirement. By the year 2035, the US Census Bureau projects for the first time in US history, older adults will outnumber children. In Monroe Township, this projected future dynamic is already the reality. In fact, the over 75 population is greater than the under 18 population. This trend also appears to be increasing. Since 2010, the 65-74 age cohort increased its share of the total population from 14.2% to 19.2%, marking the largest increase of any age cohort over that time period. As the Baby Boomer generation continues to age, the housing opportunities provided by the Township for older households will continue to attract demand to the area.

Generation X

The Generation X age cohort (those born between 1965 and 1980) is the third largest generation in the country with an estimated population of 65.2 million in 2019.¹ This generation is often overlooked as it sandwiched between the larger Millennial and Baby Boomer generations. However, this generation plays an important role in the housing market, particularly in Monroe where it is the second largest age cohort. Generation X householders are currently in their peak earning years, and this is reflected in national home buying data which shows that Gen X home buyers have the highest median income (\$125,000 in 2020) and purchase the most expensive homes (\$320,000).² These are typically single-family homes as one can see in suburban communities such as Monroe. Given the size of the Gen X cohort in Monroe, it is likely that this age cohort will continue to play an important role in housing demand in the coming years. Any land use changes will likely reflect the balance of needs between the largest age cohort in the Township, Gen X, with the Millennial generation entering the peak earning years and the Baby Boomer generation entering retirement years.

¹ <https://www.pewresearch.org/fact-tank/2020/04/28/millennials-overtake-baby-boomers-as-americas-largest-generation/>

² National Association of Realtors. "2022 Home Buyers and Sellers Generational Trends Report".

Gender

Monroe Township has more females (53%) than males (47%). This is roughly consistent with both the County and the State, which are both respectively 51% female and 49% male.

Housing

The number of housing units in the Township has increased over time (18,837 housing units per 2019 ACS), a changing housing typology growing to meet new housing demand. Younger adults are waiting to marry and have kids and the older population looking to downsize and age in place have formed a new housing demand profile, which includes a higher proportion of smaller, multi-family units, a larger proportion of rental units, and units that are affordably priced. While Monroe does provide some of these offerings, particularly for older populations, the Township is still primarily a single-family residential community.

- In Monroe, median household sizes have always been smaller compared to the County and State due to the large number of senior communities. Median Household sizes in the Township increased slightly between 2010 and 2019, using 5-year estimates, from 2.31 to 2.33 which is roughly in line with Middlesex County, which increased from 2.78 to 2.79 over the same time period. New Jersey was flat at 2.69.
- 23.2% of 2019 households had children under the age of 18 compared to 2010 where 22.9% of Monroe Township households had children under 18, representing a very slight increase. Similarly, the number of householders living alone had a slight increase from 2010 (29.2%) to the 2019 percentage of approximately 29.5%.
- 87.61% of all residential units in Monroe Township are single-family detached or attached homes and 6.39% are units in buildings with five or more units – an undiversified housing stock. While single-family housing units make up the overwhelming majority of units in Monroe, the Township does provide a variety of unit sizes. The housing stock is evenly split between the share of larger units (3+ bedrooms) and the share of smaller units (0-2 bedrooms). As of 2019, 50.8% of units were larger units and 49.2% were smaller units. Diversified housing sizes ensures that there is a variety of housing that fits the needs of all household types (i.e. singles, couples with no children, families with children).

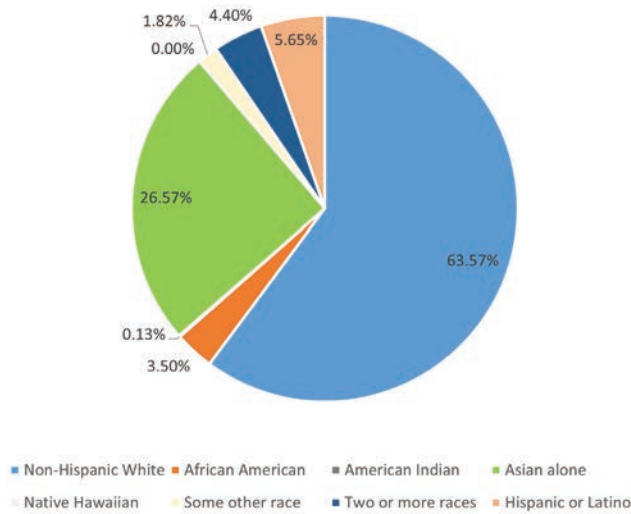
- According to NJ Construction Reporter data, in the past decade (2010-2019) Monroe Township has experienced a net increase of 3,502 single- or two-family units, a net gain of 370 multifamily unit, and a net loss of 2 mixed-use units (demolition permits versus certificate of occupancy permits issued). This represents significant development activity occurring in Monroe. The Township may wish to create zoning ordinances that would increase the number of mixed-use developments in the Township, the one lagging development type.
- The Township of Monroe also has a majority of owner-occupied housing units (90.35%) where only approximately 9.65% of the housing stock in the Township is renter-occupied. Nearly one-half of renter-occupied housing units in Monroe are in attached or detached single family homes (46.37%), and more than two-fifths are in buildings with five or more units (42.90%).
- Housing affordability is also of concern for the Township. Experts generally agree that homeowners should spend no more than 30 percent of their income on housing costs. When more than 30 percent of income is spent on housing, it is considered unaffordable. Accounting for owners and renters, 61.27% of the Monroe Township's households earning less than \$75,000 annually spent more than 30% on housing costs whereas only 12.66% of households earning more than 75K spent more than 30% on housing costs. These statistics indicate that Monroe Township is generally a more affordable municipality compared to others in New Jersey, but affordability remains a significant concern for the Township's low- and moderate-income households.

Race

Monroe Township has a rather diverse population with 63.6% of the population being white. Monroe has significant Asian population that represents 26.6% of the population. The Township's Asian population is also the fastest growing population group, more doubling its total population from 2010. The remaining population is either Hispanic, African American or mixed-race. This racial breakdown shows that the Township is less diverse than Middlesex County and the State of New Jersey. However, changes in demographic data indicate that Monroe's population is trending much more diverse. The Township has seen a slight decrease in the number of white residents while

the Asian, Hispanic, African American and mixed-race populations have all seen increases, with growth especially concentrated in the Asian population whose share of the population has increased by fourteen (14) percentage points since 2010.

Chart 1.4: Monroe Racial Breakdown, 2020



Hispanic or Latino Population

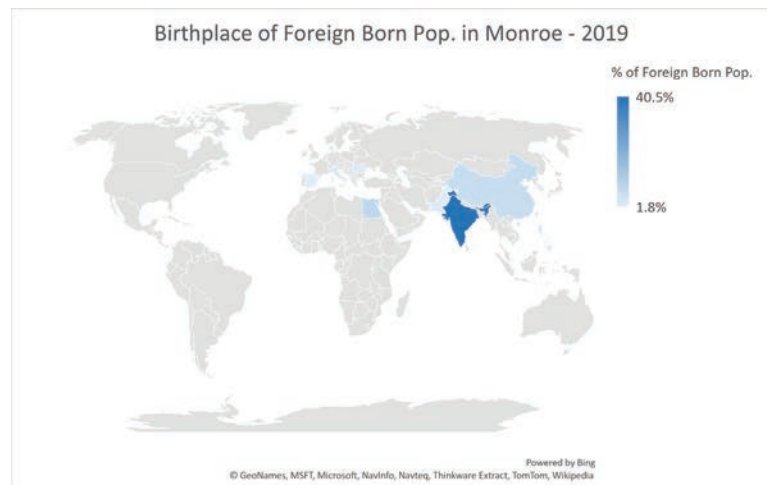
According to the 2020 Census data, 5.7% of the total population identified themselves as being Hispanic or Latino. This is a slight increase from the 4.3% of the population that identified as such in the 2010 Census. Persons of Hispanic origin can be of any race; origin is defined as ancestry, nationality, group, lineage, or country of birth of the person or the person's parents or ancestors before their arrival to the United States. According to the 2020 data, Monroe Township has a much lower percentage of people identifying as Hispanic than Middlesex County (22.4%), and New Jersey (21.6%).

Asian Population

The percentage of Monroe Township residents who identified themselves as being Asian was 26.6% in 2020, which was roughly equal to the Middlesex County percentage (26.5%) but higher than the New Jersey percentage (10.2%). This population group represents the second largest racial group in Monroe. Residents identifying as Asian are also the fastest growing population group in the Township increasing from 4,930 in 2010 to 12,913 in 2020, a 161.9% increase in just 10 years.

Foreign Born

A significant proportion of Monroe residents are foreign-born. The foreign-born population represents 22.5% of the total population of Monroe (9,947 residents). Monroe has a lower percentage of foreign-born residents compared to Middlesex County (32.8%) but a roughly equal percentage to New Jersey (22.4%). The population of the top ten largest groups of foreign-born people in Monroe is very diverse and representative of various regions of the world. A significant plurality of the foreign-born population (40.5%) were born in India. No other country represented greater than 10% of the foreign-born population. The remaining foreign-born population is from Egypt (8.3%), China (6.9%), Italy (4.0%), the Philippines (4.0%), Romania (3.0%), South Korea (2.7%), Pakistan (2.1%), the Dominican Republic (2.0%) and Spain (1.8%).

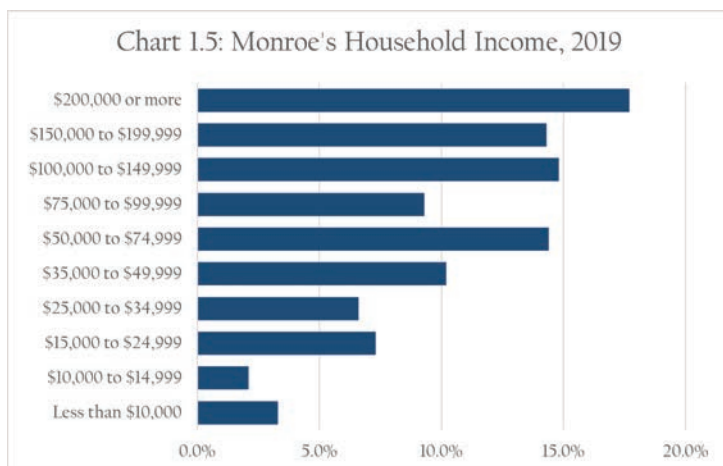


Income and Poverty

The 2019 median household income is slightly higher in Monroe Township (\$90,451) than the County (\$89,533). Very high-income households, or households with incomes equal to or greater than \$150,000, make up almost one-third (32.0%) of households in Monroe Township, more than Middlesex County (24.0%), and the state's share (24.1%).

The federally set poverty line is a specified dollar amount considered to be the minimum level of resources that are adequate to meet basic needs - the percentage of those living below the poverty line or poverty threshold is called the poverty rate. Residents living below the poverty line typically place greater needs on services provided by the Township, county, non-profits, or other organizations. In Monroe Township, 4.2% of the population for whom poverty status is determined is below the poverty level, significantly lower than the county and the state poverty rates in 2019 (8.5%, 10.0% respectively).

Chart 1.5: Monroe's Household Income, 2019



Relationship to Other Plans

The Municipal Land Use Law requires municipal master plans to “include a specific policy statement indicating the relationship of the proposed development of the municipality as described in the master plan to: (1) the master plans of contiguous municipalities, (2) the master plan of the county, and (3) the State Plan adopted pursuant to the State Planning Act and (4) the district solid waste management plan required pursuant to the provisions of the “Solid Waste Management Act.” Reviewing planning documents of neighboring municipalities and other jurisdictions with influence in Monroe is important to the development of the Master Plan.

Jamesburg

The Borough of Jamesburg (Middlesex County) is completely surrounded by Monroe Township. The Borough is located in the northwestern area of Monroe. The boundary between the two municipalities does not follow a strict street line and travels through various properties and roadways.

Jamesburg’s Medium Density Residential zones (RTC, R-75) borders several of Monroe’s Residential Single Family (R-5, R-10, R-20, and R-30) zones. These zone districts are developed in a relatively similar style with predominantly single-family homes and townhomes. The land uses in these zone districts are compatible with one another.

Jamesburg’s commercial (NC, RB, CBD) zone districts border multiple zones in Monroe. Along the western edge of the Borough, the NC district is bordered by Monroe’s LI District. Other commercial zones in Jamesburg are bordered by residential zones (R5, R30) in Monroe. The zones are compatible and will not have a negative impact on one another.

Jamesburg’s Recreation (PR) zone district borders Monroe’s Single Family (R-30). These zone districts are compatible and will not negatively impact one another.

Jamesburg last prepared a Master Plan in 2002 which was last re-examined in January 2010. Monroe Township’s land use pattern and existing regulations are consistent with existing and zoned development in Jamesburg.

Old Bridge

Old Bridge Township borders Monroe's northeastern boundary. The two municipalities are divided by Matchaponix Brook. As a result of the Brook being the boundary, the zoning along the boundary with Old Bridge is Monroe's Flood Hazard Control (FHC) zone. Monroe Township does not permit locating principal nor accessory buildings within the FHC zone.

The Township of Old Bridge last adopted its Master Plan Re-Examination in September 2017 and last amended the Re-Examination Report on May 5, 2020. Monroe's development and regulations are consistent with existing and zoned development in Old Bridge.

Manalapan

Manalapan Township borders much of Monroe's eastern boundary. The municipal boundary does not follow a strict street line or any natural features. The area along the border in both municipalities is zoned almost entirely for residential uses. A portion of Monroe's southeastern boundary is zoned for the Single Family (R3A, R-ARAF, RR-FLP) zones which border Manalapan's Single Family Residential (R-AG/4, R-40/20, R-20) districts. These zones are compatible with one another.

Manalapan last adopted a Master Plan in 1991 and completed a Master Plan Reexamination on July 16, 2009. Monroe's development and existing regulations are consistent with existing and zoned development in Manalapan.

Millstone

The Township of Monroe is bordered by Millstone along the southern end of the Township. The municipal boundary does not follow a strict street line or any natural features. The area along the border in Monroe is zoned for multiple uses. Along the more eastern half, the area is zoned for Highway Development (HD) and Light Industrial (LI) zones. In Millstone, the area is zoned for both commercial (PCD, HC, and BP) and residential (R-80). Along the more western half, the area is zoned for residential at a variety of densities (R-30, PD-AH, and R-60). In Millstone, the area is zoned for low-density residential (RU-P, R-130, and R-170). These zones are compatible with one another.

Millstone last adopted its Master Plan on November 8, 2017. Monroe's development and existing regulations are consistent with existing and zoned development in Millstone.

Cranbury

Cranbury Township borders much of Monroe's western boundary. The municipal boundary does not follow a strict street line or any natural features.

The area along the border in both municipalities contains a variety of zoning districts with the predominant nearby feature being the New Jersey Turnpike, which runs through both municipalities. In Cranbury, the area along the border with Monroe is zoned primarily for light industrial uses (I-LI, I-LI-S, LI). The area along the border in Monroe is zoned primarily for residential uses with a variety of densities and a mix of age-restricted and market rate housing (RR-FLP, RR-FLP, R-60, PRD-AH, PRC-3, PRC-2, and PRC). The Township also is zoned for some commercial uses (LI, OP). Additionally, there is a small residential district (V/HR) in Cranbury along Halsey Reed Road. These zones are compatible with each other.

Cranbury last adopted its Master Plan Reexamination on November 7, 2019. Monroe's development and existing regulations are consistent with existing and zoned development in Cranbury.

South Brunswick

South Brunswick Township borders much of Monroe's northwestern boundary. The municipal boundary does not follow a strict street line or any natural features.

The area along the border in both municipalities contains a variety of zoning districts with the predominant nearby feature being the New Jersey Turnpike, which runs through both municipalities. In South Brunswick, the area along the border with Monroe is zoned for industrial and light industrial uses (I-3, LI-4). The area along the border in Monroe is zoned for a mix of light industrial (LI) and residential (PRGC, R30, PRC-2).

South Brunswick last adopted its Master Plan Reexamination in January 2018. Monroe's development and existing regulations are consistent with existing and zoned development in South Brunswick.

East Brunswick

East Brunswick Township borders a small section Monroe's northern boundary. The municipal boundary does not follow a strict street line or any natural features.

The area along the boundary in Monroe is zoned for residential (R30) and a Flood Hazard Control (FHC) zone. In East Brunswick, the area along the border with Monroe is zoned for low-density residential (RP). These zones are compatible with each other.

East Brunswick last adopted its Master Plan Reexamination in April 2015. Monroe's development and existing regulations are consistent with existing and zoned development in East Brunswick.

Helmetta

The Borough of Helmetta borders a small section of the northern boundary of Monroe. The municipal boundary generally follows the Manalapan Brook.

The area along the boundary in Monroe is mostly a Flood Hazard Control (FHC) zone. There is also a small Neighborhood Commercial (NC) zone and residential zone (R10). Most of the area along the boundary in Helmetta is also zoned as a flood hazard control area (FH-CON). In Helmetta, a small portion of the boundary is zoned for residential (R-10) and recreational uses (REC-CON). These zones are compatible with each other.

It is unclear when Helmetta last adopted a Master Plan or Master Plan Reexamination as no plan was found on file. Monroe's development and existing regulations are consistent with existing and zoned development in Helmetta.

Spotswood

The Borough of Spotswood borders a small section of the northern boundary of Monroe. A portion of the municipal boundary follows the Manalapan Brook while the eastern portion of the boundary does not follow any general roadway or natural feature.

Monroe Township zones much of the boundary with Spotswood for Flood Hazard Control (FHC) zone district. A small portion of the boundary is zoned for residential (R7.5) and commercial (NC). The area along the boundary in Spotswood is a mix of Conservation (C) and residential (R10). These zones are compatible with each other.

It is unclear when Spotswood last adopted a Master

Plan or Master Plan Reexamination as no plan was found on file. Monroe's development and existing regulations are consistent with existing and zoned development in Spotswood.

East Windsor

East Windsor Township borders a small section of the southwestern boundary of Monroe. A portion of the municipal boundary follows the Millstone River, but most of the boundary does not follow any general roadway or natural feature.

The portion of the municipal boundary along the Millstone River is zoned for Flood Hazard Control (FHC) zone in Monroe. A small portion of the municipal boundary is zoned as the mixed-use VC-2 zone. The remaining area in Monroe is zoned for residential use (PRC-2, R30). The area along the boundary in East Windsor is primarily zoned as Planned Unit Development (PUD) with a small section of the Township north of Disbow Hill Road zoned rural agricultural (R-A). These zones are compatible with each other.

East Windsor last adopted its Master Plan Reexamination on July 25, 2019. Monroe's development and existing regulations are consistent with existing and zoned development in East Windsor.

2001 New Jersey State Development and Redevelopment Plan

In 1986, the New Jersey Legislature passed the New Jersey State Planning Act, which created the State Planning Commission and required the preparation and adoption of the State Development and Redevelopment Plan (the "State Plan"). The most current adopted plan is dated March 1, 2001. The purpose of the State Plan is to:

Coordinate Planning Activities and establish statewide planning objectives in the following area: land use, housing, economic development, transportation, natural resource conservation, agriculture and farmland retention, recreation, urban and suburban redevelopment, historic preservation, public facilities and services and intergovernmental coordination (N.J.S.A. 52:18A-200(f), the State Planning Act).

The State Plan uses a policy map to differentiate areas from highest growth to lowest growth based on information, such as natural resources, sewer availability, etc. These differentiations are called planning areas, which range from PA1-Metropolitan

to PA-8 state park. The Township of Monroe lies primarily within the Suburban Planning Area (PA2). The remaining area, primarily in the southeastern area of the Township is within the Rural Planning Area (PA4). For reference, the State Planning Areas Map can be found on page 44 in the **Land Use Plan**. The SDRP specifies that PA2 areas shall be the locations for future development to be guided into more efficient and serviceable patterns.

The intent of the PA4 designation is to protect and enhance rural areas and the agricultural industry by discouraging land use policies that produce sprawl. The SDRP promotes growth within existing urbanized areas, preferably in the form of compact development with ready access to existing infrastructure, including transit systems. Monroe Township has significant suburban sprawl with some commercial and light industrial areas. The PA2 area should:

- Provide much of the state's future development;
- Promote growth in Centers and other compact forms;
- Protect the character of existing stable communities;
- Protect natural resources;
- Redesign areas of sprawl;
- Reverse trend towards further sprawl; and
- Revitalize cities and towns.

The PA4 area should:

- Maintain Environs as large contiguous areas of farm or other lands;
- Revitalize cities and towns;
- Accommodate growth in Centers;
- Promote a viable agriculture industry;
- Protect the character of existing stable communities;
- Confine water and sewer infrastructure to Centers.

This Monroe Township Master Plan is consistent with the State Plan.



COMMUNITY ENGAGEMENT

The Master Plan cannot be written, nor recommendations be made without input from the people who live, work, and visit Monroe. Without public input, this document will not accurately represent the wants and needs of Monroe residents. Throughout the year-long Master Plan process, the Township and its consultants, H2M, Sam Schwartz, and Leon Avakian (the “Master Plan Team”), worked hard to obtain ideas, opinions, feedback, and concerns, using online engagement and three community workshops. This collaborative approach provides community insight on the future of the Township of Monroe.

Key to the success of this community outreach initiative was the partnership between the Township and the consultants developing this Master Plan. Without the Township promoting the project by tapping into its existing communication tools such as its newsletter, its social media accounts and website, and through the individuals that believed in the project and became “ambassadors” of the plan, this project’s community engagement outreach would not have been as successful. The following section describes the public outreach process in the development of this Master Plan.

1. Master Plan Sub-Committee

At the launch of the project, a Master Plan Sub-Committee comprised of members of the Township’s Planning Board, Zoning Board, and Township Staff. The Master Plan team held regular meetings throughout the planning process with the Sub-Committee. Committee members include:

- Terence Van Dzura, Councilman
- Joseph Stroin, MTUD Director
- Kevin McGowan, Planning Board Member
- Karen Polidoro, Planning Board Member
- Carol Damiani, Zoning Board Member
- Vincent LaFata, Zoning Board Member
- Jerome Convery, Planning Board Attorney
- Mark Rasimowicz, Planning Board Engineer
- Malvika Apte, Board Planner
- Alan Weinberg, Township Administrator

2. Master Plan Stakeholder Group

At the launch of the project, the Township formed a Stakeholder Group comprised of members of the community who would provide input from an array of different expertise and knowledge. The Master Plan team held meetings and conducted one-on-one interviews with members of the stakeholder group to gain valuable information and engagement on the process. The Stakeholder Group members include:

- Terence Van Dzura, Chair, Councilman
- Kevin McGowan, Vice Chair
- Michele Arminio, Board of Education
- Charles DiPierro, Councilman
- Charles Lerman
- Mary Lange
- Leah Wagner
- Michael Markel
- John Katerba
- Sam Landy
- Elizabeth Preuster
- Monica Tarantino
- Robert Dudik
- Frank Piscitelli
- Sanjay Sharma
- Virgil Caputo

3. Committee Meetings

A representative with the Master Plan team met with both the Environmental Commission and the Open Space Committee. These meetings were intended to introduce the Master Plan process to the different Township committees and to gather feedback from members of each respective committee on the issues facing the Township. Feedback from both committees was taken into consideration and incorporated into the Plan.

4. Online Engagement

The Master Plan Team established an online presence of the Master Plan through a project-specific webpage (<https://publicinput.com/monroemp>). The website contained a wide range of information regarding the project, including a flyer describing the project, frequently asked questions, the workshop date and location, summary reports of the workshop and survey results, and links to an online survey. Monroe also promoted the workshops and the project through announcements on the Township's website, newsletter and social media pages.

5. Surveys

To gain valuable feedback in the most convenient format for project participants, a Master Plan Survey was developed both for online and in hardcopy format. The Township provided older residents with the option to take the survey over the phone with Township employees. Survey responses were collected throughout the whole Master Plan process. During the survey period, 1,795 respondents completed the survey and provided 5,498 individual comments. A summary of the survey results can be found in **Appendix A**.

6. Workshops

The Master Plan Team held a series of public meetings and workshops at different stages of the Master Plan development in order to collect public input.

a. Public Workshops

The Master Plan Team hosted three master plan community workshops during a three-month period in the summer of 2021. The community workshops occurred on June 17, 2021, June 30, 2021, and August 4, 2021. These meetings were held in multiple locations throughout the Township including the Senior Center, the Recreation Center and the Township Library. The Team engaged with around 100 residents over the course of the three workshops, which were all held from 5PM to 8PM. Summaries for each community workshop were posted online on the project website for public viewing.

Summaries for the three community workshops can be found in **Appendix B**.



b. Planning Board and Council Interim Check-ins

The Master Plan Team attended a Planning Board meeting at the planning process, on April 22, 2021 to introduce the Team to the Planning Board and discuss details of how the Master Plan process would work over the course of the next several months.

The Master Plan Team then gave a presentation on the draft version of the Master Plan to the Planning Board on August 25, 2022 to gather comments from Board members. The presentation used at this meeting can be found in **Appendix C**.

7. Draft Plan Review

The draft Master Plan was thoroughly vetted and reviewed by the Master Plan Advisory Committee, Planning Board, and the public. Following the August 25th Planning Board meeting, there was a public comment period that lasted through the end of September 2022 for the general public to provide comments on the draft Master Plan. In compliance with New Jersey State statute, the Planning Board held at least one public hearing for the draft Master Plan. During the 10-day notice period, the draft was posted online for public review.

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LAND USE PLAN



Introduction

As one of the required master plan elements, this land use plan element establishes a framework for growth and development and will serve as the basis for Monroe's zoning code. Land use policies determine several aspects of a community including population density, the availability of housing, and the location of commercial, industrial, residential, and open space areas. A good balance of land uses can help a community meet its goals for health, safety, and quality of life.

Monroe Township initially developed as a farming community and remained so from its founding in 1838 through the 1950s. Starting in the 1960s, Monroe experienced significant population growth and suburbanization, which has continued through to the present day. Monroe's location in the center of the state has propelled the Township's growth as residents enjoy a wealth of opportunities to employment centers, commercial areas and recreational locations. Additional drivers of this growth included the opening of Exit 8A on the New Jersey Turnpike and the establishment of several age-restricted communities. More recently, residential communities, including both age-restricted dwellings and market-rate housing, have been developed primarily around Route 33 and the New Jersey Turnpike as well as other conveniently located areas of the Township. Monroe's settlement on its obligation to New Jersey's court-ordered affordable housing mandate will contribute to additional growth in residential development in the coming years. Monroe's location and access to major transportation networks also attract demand for light industrial space. Planning for various different types of land uses is essential to ensure Monroe residents continue to enjoy a high quality of life.

Goals and Objectives

- 1. Achieve a balance of land use types that maintains and enhances the quality of life of the Township.**
 - a. Mix new growth in residential development with open space acquisition and preservation.
 - b. Create linkages between different land uses.
 - c. Update zoning regulations to ensure high quality and appropriate development.
 - d. Maintain rural and agricultural development pattern in appropriate locations in line with the State Development and Redevelopment Plan.
- 2. Promote industrial development in appropriate areas of the Township.**
 - a. Encourage infill industrial development with the industrial park southwest of the 8A Turnpike interchange.
 - b. Provide for additional industrial and corporate center growth along Route 33 and Cranbury – South River Road.
 - c. Link future industrial development with transportation infrastructure.
- 3. Encourage appropriate commercial development in areas of population concentration and where existing infrastructure can accommodate.**
 - a. Incentivize high quality mixed-use development along Route 33 corridor.



- b. Update commercial zoning regulations to incentivize new commercial development in appropriate locations.
- c. Encourage a mix of commercial uses along commercial corridors.
- d. Consider redevelopment designations where appropriate.

4. Develop and implement policies that comprehensively address the needs of an aging population.

- a. Maintain affordability for senior residents on fixed incomes.
- b. Ensure all residents, and particularly seniors, have access to quality medical facilities, recreational facilities, and commercial opportunities.

5. Encourage redevelopment and infill development where it is feasible in Monroe to promote more efficient use of land and existing infrastructure.

- a. Consider redevelopment to improve streetscape and connections to residential areas.
- b. Pursue creating a walkable town center in Monroe.
- c. Update land use regulations to encourage growth in built-out areas of the Township.

6. Ensure that Monroe has in place sufficient strategies to minimize natural hazard risks and climate change vulnerability.

- a. Encourage energy efficient design and sustainable building practices.
- b. Encourage reduced carbon footprints through alternative fuel vehicle infrastructure and promoting alternative modes of transportation to minimize automobile travel.
- c. Maintain and enhance regulations that discourage unnecessary development in wetlands and flood hazard areas.
- d. Implement best practices in stormwater management.

Existing Development and Land Use

Monroe has historically been an agricultural community with residential neighborhoods spread out across the Township. The older residential neighborhoods are generally located in the northern part of the Township near Jamesburg and the municipal boundaries with Spotswood, Helmetta, East Brunswick and Old Bridge. The older residential neighborhoods tend to have modest sized homes on smaller lots. More recent residential developments tend to be on larger lots with homes of larger residential size. There has been significant commercial and office development that has come to accommodate the needs of the new residents.

Monroe’s historically rural character is still present in the Township despite recent suburban development. This may be due in part to development constraints, particularly in the southern end of the Township. **Figure 2.1** shows land use in the Township based on 2015 New Jersey Department of Environmental Protection (NJDEP) data. Wetlands tend to be concentrated in the southern and eastern region of the Township while residential development is generally in the northern and western sections. Quantitative analysis confirms that residential and wetlands are the most prevalent land uses in Monroe (see **Figure 2.1, Table 2.1**). Other common land use types are agricultural and open space.

Monroe’s proximity to the New Jersey Turnpike lends itself to more intense development in the western end of the township, including most of Monroe’s light industrial developments and some commercial properties. There is also some commercial development along Route 33 in the southern area of Monroe, as this corridor is one of the few commercial zoning districts. The remaining land is composed of large residential subdivisions. Most include larger lot sizes, contributing to the Township’s rural feel. Some of these residential subdivisions include planned retirement communities and golf course communities. There are several cluster subdivision developments as well, which help to preserve open space and maintain Monroe’s character. In the southeastern region of the Township, much of the residential development is composed of single-family homes on rural roads. These areas are expected to remain sparsely developed due to the presence of wetlands and the lack of sewer and water utilities.



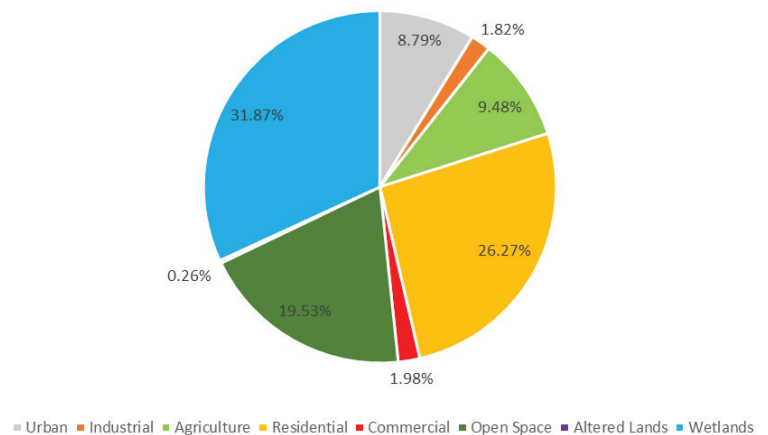
Agricultural land is found throughout the Township with farmlands of various sizes located near wetlands and residential developments. Recreational lands are woven through certain residential developments. Forested areas are mostly in the northern region of the Township in and around Thompson Park.

Land Use

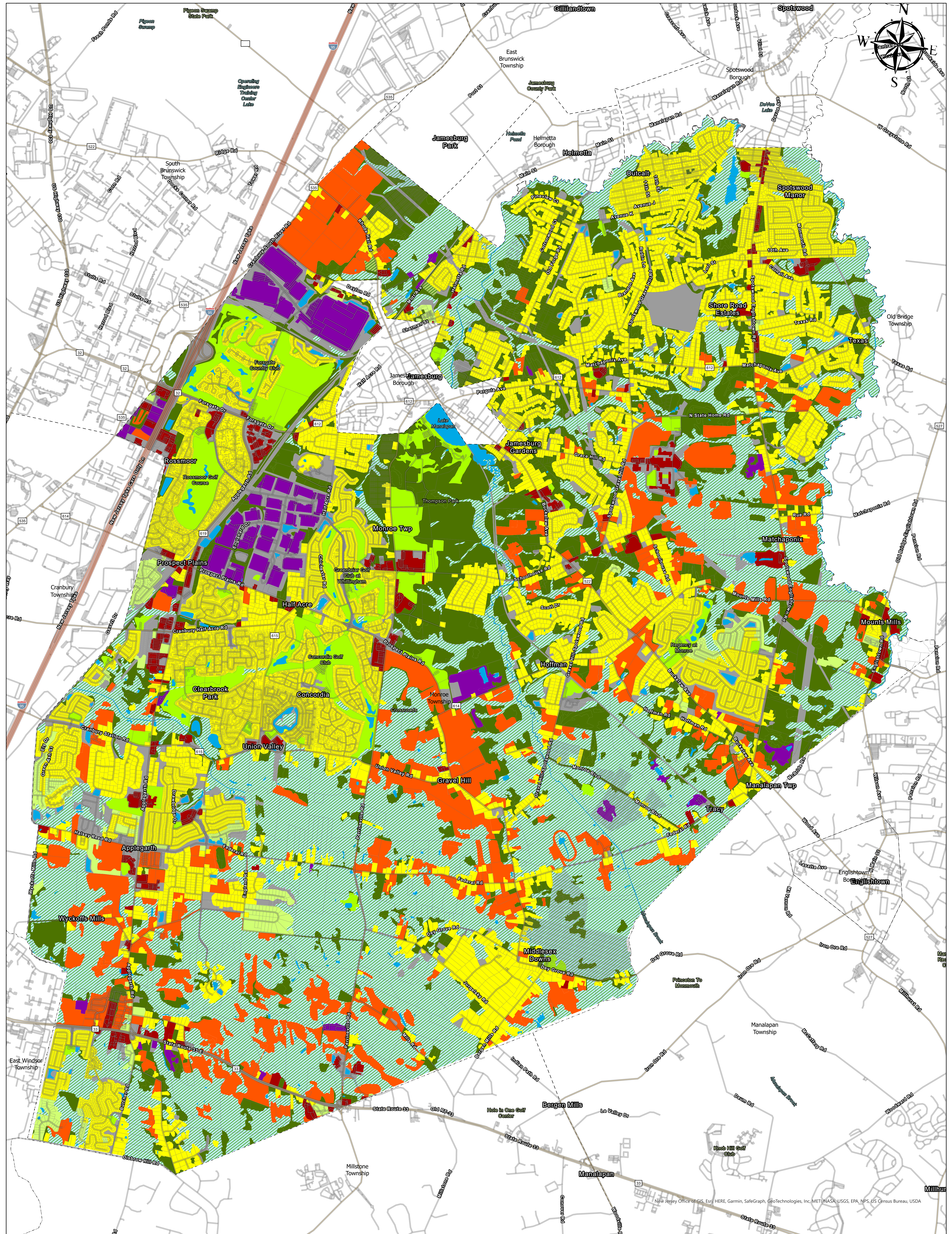
Given Monroe’s location in southern Middlesex County, it is unsurprising that the Township’s land use breakdown shows it with a significant amount of open space and wetlands. According to NJDEP’s 2015 Land Use/Land Cover data, almost one-third (31.87%) of Monroe Township is covered by Wetlands of various types. The Township’s wetlands are located throughout Monroe but are especially concentrated in the southern and eastern portion (**Chart 2.1** and **Map 2.1**). Additionally, about one-fifth (19.53%) is classified as open space while almost ten percent (9.48%) is covered by an agricultural use. Residential uses account for about 26%. No other type of use accounts for greater than ten percent. One of the most significant land use types in Monroe Township is land dedicated to transportation, which falls under the urban classification according to the NJDEP data. Nearly ten percent (8.79%) of the Township’s land is used for transportation, primarily due to the New Jersey Turnpike, existing rail line, and associated uses. Between residential uses, transportation uses, and open space, very little land is available for commercial and industrial uses. Industrial uses account for 1.82% while commercial uses account for 1.98%.

Analysis of parcels by tax class shows that residential, farm, and public properties comprise the largest shares of land by acreage. Percentages differ slightly between land use data and tax class data due to how the data was collected and the time periods they represent.

Monroe Land Use, 2015



8.6% of land in Monroe is classified as vacant land, which suggests there is a significant amount of potential for greenfield development. However, after removing parcels that are completely covered by wetlands there is only about 1,500 acres (about 5%) of developable land. This does not account for the actual suitability of these parcels for development as there may be topographic or other conditions prohibiting development on some of these lots.



- Land Use Type**
- Bodies of Water
 - Residential
 - Recreational
 - Cemetery
 - Commercial
 - Agricultural
 - Forest
 - Wetlands
 - Industrial
 - Transportation
 - Transitional
 - Other

Monroe Township

Land Use Map



New Jersey Office of GIS, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc., METI, NASA, USGS, EPA, NPS, US Census Bureau, USDA

2015 Land Use	% of Acres
Open Space	19.5%
Residential	26.3%
Agriculture	9.5%
Commercial	2.0%
Industrial	1.8%
Altered Lands	0.3%
Wetlands	31.9%
Urban	8.8%

NJ Property Tax provides a database of property tax records for all municipalities in New Jersey. The table below shows the various land uses in the Township based on property tax assessment. From the table, it is evident that the Township has a wide range of uses with a plurality of land area dedicated to residential uses at 32.3%. The second most prominent land use is farmland (22.0% of land area), both preserved and unpreserved with public properties – which are lands owned by the Township, the County, or State – being almost as prominent (20.6%). It should be noted that not all public property parcels are permanently preserved parcels.

Table 2.2 also shows the assessed value of the various land uses in the Township based on 2020 tax data. It is evident that the tax base for the Township is overwhelmingly from residential uses. Residential uses account for 88.53% of the total ratable value while apartment uses account for an additional 1.06%. The table also highlights the lack of commercial and industrial uses in Monroe. These uses encompass only 50 parcels and make up 5.53% of the total ratable value. The results of this property tax analysis highlight the importance of the Township to work to diversify its land uses to create a balance of property tax ratables.

Property Tax Data

Analysis of property tax data is another way to assess land use patterns in a municipality. Every parcel is assessed for tax purposes and receives a property tax classification based on the existing use. Land use analysis based on property tax data is able to identify existing uses and the remaining vacant parcels while providing more timely data as property taxes are assessed on an annual basis. However, property tax data does not provide various environmental features, such as the existence of wetlands that are available in the LU/LC data.

Tax Class	% of Acres	Value of Assessment	% of Total Ratable Value	Number of Parcels
Class 1: Vacant Land	8.6%	\$53,807,100	2.80%	594
Class 2: Residential	32.3%	\$1,698,948,800	88.53%	3,838
Class 3: Farm (Regular & Qualified)	22.0%	\$20,429,100	2.07%	261
Class 4A: Commercial	5.9%	\$105,753,800	5.51%	49
Class 4B: Industrial	2.3%	\$431,300	0.02%	1
Class 4C: Apartments	0.3%	\$39,703,200	1.06%	5
Class 5: Railroads	0.4%	N/A	N/A	3
Class 6: Telephone	0.0%	N/A	N/A	N/A
Class 15A & B: Public & Private School	1.0%	N/A	N/A	2
Class 15C: Public Property	20.6%	N/A	N/A	174
Class 15D: Charitable	0.2%	N/A	N/A	6
Class 15E: Cemetery	0.1%	N/A	N/A	1
Class 15F: Other Exempt	6.2%	N/A	N/A	69
Total	100.0%	\$1,919,073,300	100.0%	5,003

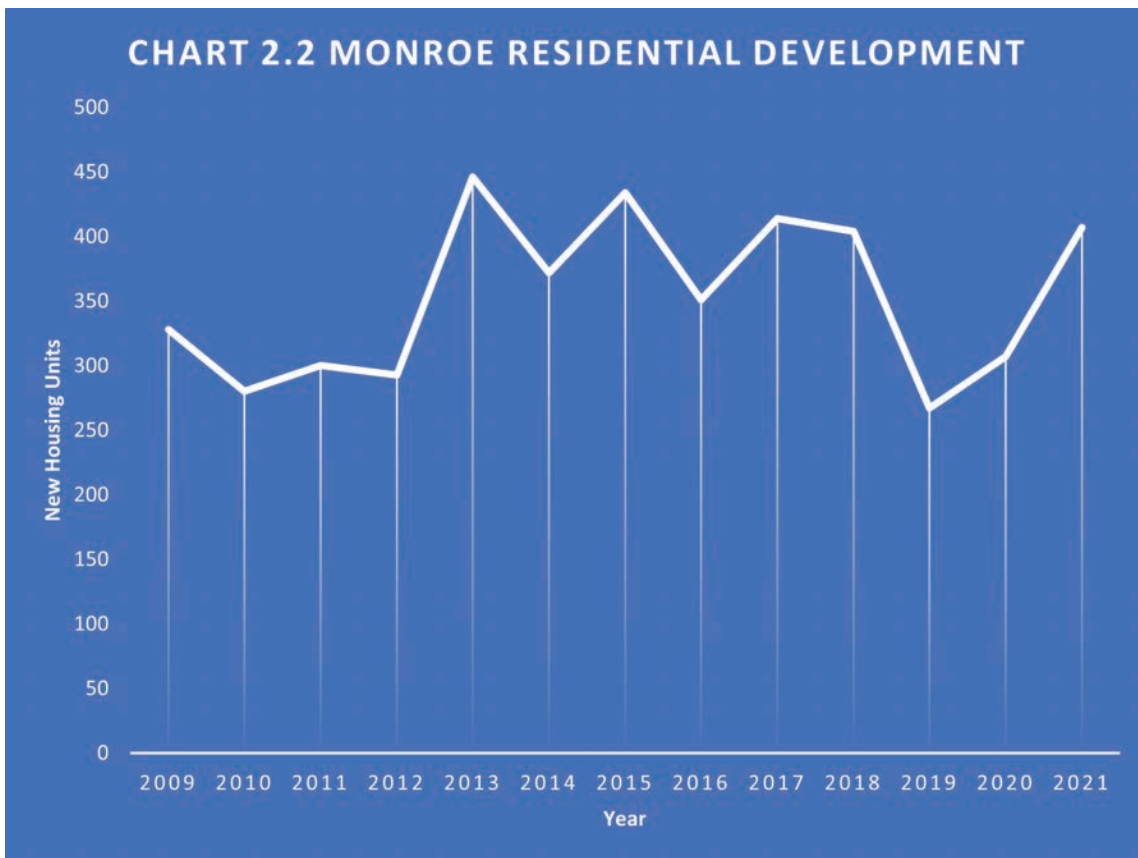
Recent Development Trends

Data from the New Jersey Department of Community Affairs' Construction Reporter is used to indicate development trends in Monroe Township. Between 2009 and 2021 there were a total of 4,603 certificates of occupancy (CO) granted. A CO is a document which certifies that the building complies with applicable building codes and other laws. It is granted at the completion of construction and means that the building can be legally occupied. As such, **Table 2.3** below shows the number of housing developments that were added to the Township's habitable housing stock between 2009 and 2021. Out of the total COs granted 3,771 (87.5%) were one- and two-family developments. There were 572 (12.4%) multifamily developments and two (less than 0.1%) were mixed use developments. Over the same period, 56 developments were demolished, 48 of which were one- and two-family, four (4) of which were multifamily, and four (4) of which were mixed use. Recent development trends are a continuation of trends since the 1990s: there has been steady growth in the Township of primarily single-family residential dwellings. Compared to development before the 1980s recent developments are relatively smaller lots within large suburban subdivisions, while earlier developments tended to be larger rural lots.

Chart 2.2 shows the total number of new housing units certified for occupancy between 2009 and 2021. There is no clear trend due to the rising and falling numbers over the years. Each year, between 267 and 446 residential developments were certified and the average net new homes per year was 350 units. The data do not indicate that there has been any significant increase in the rate of development in recent years. Rather, the trend indicates a level of steady, high growth in the construction of new residential units which has helped fuel strong growth in the Township's population.

Table 2.3: Residential Development 2009-2021

Year	CO			Demo			Net		
	1 & 2 Family	Multi-family	Mixed-use	1 & 2 Family	Multi-Family	Mixed-use	1 & 2 Family	Multi-Family	Mixed-use
2009	327	1	0	2	0	0	325	1	0
2010	274	5	1	4	0	1	270	0	0
2011	300	0	0	3	0	0	297	0	0
2012	273	20	0	2	0	0	271	0	-1
2013	436	9	1	2	0	0	434	0	-1
2014	362	10	0	6	0	1	356	0	0
2015	419	15	0	2	0	2	417	0	0
2016	341	37	0	8	0	0	306	1	0
2017	292	122	0	3	0	0	289	0	0
2018	278	126	0	4	0	0	274	0	0
2019	242	25	0	5	0	0	237	0	0
2020	254	53	0	3	4	0	251	49	0
2021	258	149	0	4	0	0	254	149	0
Total	4,029	572	2	48	4	4	3,981	568	-2
	4,603			56			4,547		



Existing Zoning

Zoning Districts

Zoning in Monroe consists of 16 residential districts including Single-Family Dwelling Districts (R-3A, R-60, R-30, R-20, R-10, R-7.5, R-5, RR-FLP), Residential-Age Restricted Affordable Housing (R-ARAF), and Planned Development Dwelling Districts (PD-AH/NC, PRD-AH, PD-SH, PRGC, PRC, PRC-2, and PRC-3). The remaining 13 districts consist of Non-residential Districts (PO/CD, OP, NC, CC, HD, LI, FHC), Mixed Use Districts (POCD-AR-AH, and MU-HD-R-AH), Highway Development-Residential-Affordable Housing District (HD-R-AH), and Overlay Zones (VC-1, VC-2, ASOZ, and AHMUD-HD). These various zones provide for different uses, densities, and setbacks among several other regulations common with zoning practices. These differences will be discussed in greater detail below.

Single-Family Dwelling Districts (R-3A, R-60, R-30, R-20, R-10, R-7.5, R-5, and RR-FLP)

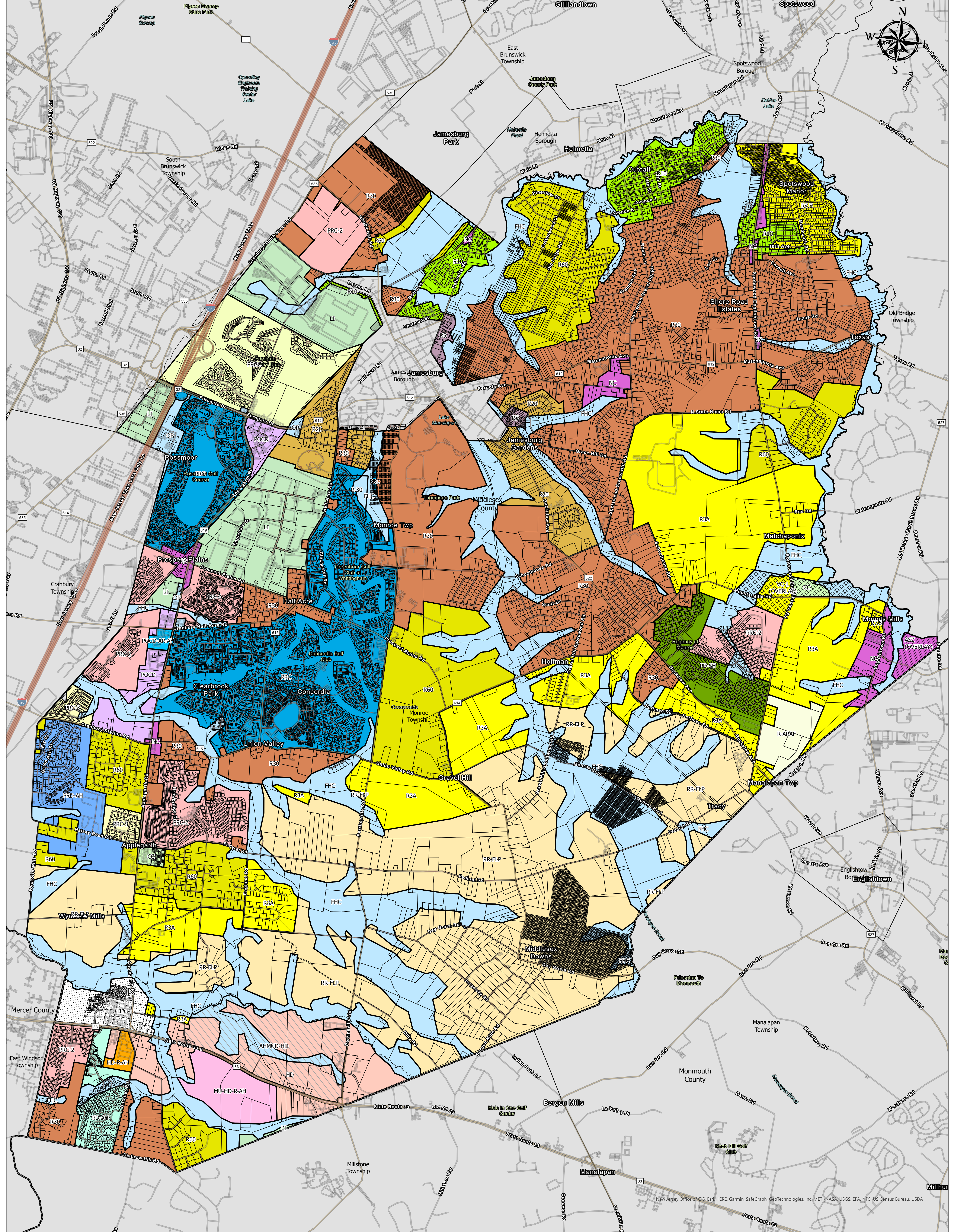
Single-Family Dwelling Districts are the most prevalent districts in the Township. They are located throughout Monroe and zoned for various densities that define the character for the Township's other types of development. These districts have in common their primary use, which is detached single-family

dwellings, but they vary in bulk standards, densities, and additional permitted uses.

The R-3A, R-60, R-30, and R-20 permit farms and other agricultural activities in addition to single-family dwellings. They also permit parks and other recreation facilities as well as municipal buildings operated by the Township. Permitted accessory uses are garages and swimming pools.

Lot size for each respective district varies. R-3A Residential Agricultural District's minimum lot size is three acres. R-60 Residential District and RR-FLP Rural Residential Farmland Preservation District have a minimum lot size of 60,000 square feet, making these two the least dense districts. R-30, R-20, R-10, R-7.5, and R-5 have the minimum lot requirement of R-60 if the lot lacks public water and sewer. Otherwise, R-30's minimum lot size is 30,000 square feet. R-20's minimum lot size is 20,000 square feet. R-10's minimum lot size is 10,000 square feet, and R-7.5's minimum lot size is 7,500 square feet, and R-5's minimum lot size is 5,000 square feet, making it the densest zoning district.

Districts R-3A, R-60, R-30, and R-20 each have a cluster provision which permits "cluster development," a type of development that allows for deviations from bulk standards for the purpose of preserving open space. This cluster option requires approval by the



Zoning Districts	MU-HD-R-AH	PRC-2	R10
AHMUD-HD	NC	PRC-3	R20
ASZ (OVERLAY)	OP	PRD-AH	R30
CC	PD-AH	PRGC	R60
FHC	PD-SH	R-ARAF	RR-FLP
HD	POCD	R3A	VC-1 (OVERLAY)
HD-R-AH	POCD-AR-AH	R5	VC-2
LI	PRC	R7.5	

Monroe Township

Zoning Map



New Jersey Office of GIS. Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc., METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA

planning board. Conditional uses within districts include farm stand and market, and community residences for the developmentally disabled. RR-FLP has annual membership clubs, nursery, horticulture, and landscaping, and mulch processing facilities in addition to the conditional uses for R-3A, R-60, R-30, and R-20.

The remaining single-family residential districts (R-10, R-7.5, and R-5) permit the following conditional uses: parks and recreation facilities not operated by Monroe Township, home occupations, satellite antennas, and public utility installations. These uses are also permitted conditionally for the other single-family residential districts.

Residential-Age Restricted Affordable Housing (R-ARAF)

The R-ARAF Residential-Age Restricted Affordable Housing District provides for a mix of market-priced housing and housing affordable to low- and moderate-income age-restricted households. It is along the eastern edge of the Township, surrounded by other residential districts. The only permitted use in this district is development with a minimum of 20% of the total number of dwelling units set-aside for low-income households and 13% of the affordable dwelling units to be affordable to very low-income households. The minimum number of affordable multi-family age-restricted rental apartment dwelling units shall be 53. Permitted accessory uses are decks and patios in the rear yard and open space and recreational facilities.

Planned Development Dwelling Districts (PD-AH/NC, PRD-AH, PD-SH, PRGC, PRC, PRC-2, and PRC-3)

Monroe's Planned Development Dwelling Districts are zones which are intended to promote the development of large tracts of land to create a mix of residential, open space, and, in certain zones, commercial uses. These zoning districts are dispersed throughout the Township, with varying bulk standards, unit mixes, age restrictions, and affordability controls.

The Planned Development Affordable Housing/Neighborhood Commercial District (PD-AH/NC) permits planned inclusionary residential developments that offer a mix of market-priced housing and housing affordable to low- and moderate-income households, as well as neighborhood commercial facilities. The permitted uses in the PD-AH/NC district include single-family detached dwellings, zero lot line dwelling units, townhouses, flats, open space and recreation

facilities, and a neighborhood shopping center on a maximum of 6% of the tract area which permits retail, services, business and professional offices, banks and other fiduciary institutions, and eating and drinking establishments. The PD-AH/NC District requires 17.1% of dwelling units be set aside to be sold or rented at prices or rents that are affordable to low and moderate-income households.

Planned Residential Development Affordable Housing District (PRD-AH) is similar to PD-AH/NC in that it allows a mix of market-priced housing and affordable housing, but it does not allow zero lot line dwelling units, flats, or commercial development. PRD-AH permits senior housing and garden apartments while PD-AH/NC does not. The zoning district only places an age restriction for occupants of the housing units within the senior housing portion of the development. The PRD-AH zone also has a different affordable housing mix, with a minimum of 23.03% of total units being required to be affordable for low- and moderate-income households.

The Planned Development Senior Housing District (PD-SH) is designed to enable the planned development of a residential retirement community which contains recreational facilities and may contain medical and similar services. As a planned retirement community, the zone requires dwellings for owner-occupancy, and the dwellings are to be occupied by at least one (1) person age fifty-five or over with some exceptions related to those divorced or widowed in accordance with the laws of the State of New Jersey. The only uses permitted in the PD-SH district are associated retirement community uses and fire station and emergency medical response facilities, and administration, maintenance, and security buildings. The minimum area for PD-SH developments is 175 acres, with no more than 30% of the area covered by buildings. The density is limited to 3.7 dwellings per acre.

The Planned Retirement Community District (PRC) is similar to the PD-SH district as the district has the same requirements regarding age restriction and owner occupancy for the dwelling units. The main differences between the two zones are some additional uses permitted being permitted in the PRC zone and the allowance of higher residential density in the PRC. The PRC district allows for lakes, places of worship, motels, a small amount of retail space, and riding stables. Density shall be no more than 14 dwelling units per acre. The Planned Retirement Community 2 (PRC-2) and Planned Retirement Community 3 (PRC-3) districts are different in their minimum site area,

where the PRC-2 stipulates a minimum parcel of 100 acres while the PRC-3 requires a minimum parcel of 50 acres. Both zones have a maximum density of 3.5 dwelling units per acre. PRC-2 permits a lake, while PRC-3 does not.

Planned Residential Golf Community (PRGC) is designed to allow planned development of a community of residential dwellings, including single-family detached, patio homes, town homes, and duplex dwellings. This may be restricted to individuals over a specified age limit, and golf courses and related facilities. This district requires at least 400 acres for a single development, with at least 60% of the tract area preserved as green space. No more than 37% of the tract area is devoted to residential uses, and density is limited to 3.7 units per acre of residential land. The district also has design standards for streets which discourage through traffic on local streets.

Non-residential Districts (PO/CD, OP, NC, CC, HD, LI, FHC)

The non-residential districts of Monroe cover a relatively small portion of land area. The Planned Office Commercial District (PO/CD) occupies a relatively small amount of land along Applegarth Road in Monroe. As the name suggests, the district permits professional office and related uses such as corporate offices, data processing facilities, medical offices and clinical laboratories, retail pharmacies, and other services. Other permitted uses include restaurants, and sports and health facilities incorporated into other buildings.

The Office Professional District (OP) allows professional and general offices, including law and accounting, engineering, real estate, medical, and other professional services. OP lots must be minimum one acre in size, with a maximum 30% lot coverage, and a 20-foot landscaped buffer is required on rear lots which abut residential use.

The Neighborhood Commercial District (N-C) is located in small zones adjacent to residential areas. This district permits retail stores of a neighborhood or daily-needs type, professional service establishments, eating and drinking establishments, and other services. The district requires developments to be designed as a unified commercial village with a single architectural motif which is in character with the surrounding residential area. There are additional design requirements that promote accessibility and compatibility with the surrounding area and pedestrian-friendly design.

The Community Commercial District (CC) comprises a very small portion of Monroe's total area. The district permits retail stores which serve community-wide needs, personal service establishments, eating establishments, and other services as well as business, professional, and medical offices. The same design requirements as the NC district apply to the CC district.

The Highway Development District (HD) is in the southern region of the Township along New Jersey State Route 33. The district promotes a diverse mix of commercial and light industrial uses that have a regional market for goods and services reaching beyond Monroe's boundaries. Permitted uses are business and professional offices, corporate centers, theaters and other fully enclosed commercial entertainment establishments, regional shopping centers, new auto sales, wholesale storage establishments, and other services. Like the other commercial districts, the HD zone requires design as a unified commercial village with a single architectural motif, which must be in character with the surrounding residential area.

Monroe's Light Industrial District (LI) is found in a few areas generally along the southern and western edges of the Township. Light Industrial uses include assembly and finishing of materials or products, metal welding and machine shops, wholesale, distributive or storage establishments, research laboratories, business and professional offices, and agricultural activities. A 100-foot buffer is required for any road frontage, which consists of a minimum six-foot berm, topped with evergreen trees.

In addition to the abovementioned non-residential zones, the Township has a Flood Hazard/Conservation (FHC) District. The boundaries of the zone are the flood hazard areas that are delineated by the Federal Department of Housing and Urban Development for the National Flood Insurance Program, which was enacted in 1968 to protect house buyers who qualify for insurance. The areas include flood hazard areas which prohibit principal or accessory building and areas which require NJDEP approval for modifying the waterway.

Mixed Use Districts (HD-R-AH, POCD-AR-AH, and MU-HD-R-AH)

The Highway Development-Residential-Affordable Housing (HD-R-AH) District allows for developments with a mix of highway and commercial uses, market-priced housing, and housing affordable to low- and moderate-income households. Permitted uses includes all nonresidential uses permitted in the HD

District and inclusionary housing development. The maximum allowed number of market-rate multifamily townhouse and apartment dwelling units is 120, The zone requires that a minimum of thirty (30) multifamily units be affordable to low- and moderate-income households, 13% of which shall be affordable to very low-income households.

The Planned Office Commercial Development-Age Restricted Affordable Housing (POCD-AR-AH) District is a district that applies to several lots on a single block. This district was previously a Planned Office Commercial District that now includes a mix of market-priced age-restricted housing and affordable age-restricted housing. The POCD-AR-AH district requires mixed-use buildings which have non-residential uses on the first floor, with residential dwelling units being deed-restricted to permit only senior citizen residents meaning the dwellings are to be occupied by at least one (1) person age fifty-five or over with some exceptions related to those divorced or widowed in accordance with the laws of the State of New Jersey. A minimum of 23.24% of the dwelling units shall be set-aside for affordable housing, with 13% affordable to very low-income households.

The Mixed Use-Highway Development-Residential-Affordable Housing (MU-HD-R-AH) District promotes a mix of highway commercial uses, market-priced housing, and housing affordable to low- and moderate-income family households. The district is located along New Jersey Route 33 in the southern end of the Township. The district requires a minimum of 8.15% of the total number of dwelling units be affordable housing, with 13% of them affordable to very low-income households. There will also be a phased development of two 100% affordable family rental projects. The district also allows all nonresidential uses that are permitted in the HD Highway development district.

Overlay Zones (VC-1, VC-2, ASOZ, and AHMUD-HD)

The VC-1 Village Center Overlay is designed to promote a range of commercial office and residential land uses within a pedestrian-friendly, mixed-use environment that will serve local and community-wide needs and create new business and employment opportunities. The overlay district lies near the eastern edge of the Township, overlaying R-3A, FHC, and CC zones. Pedestrian movement is encouraged by generally permitting stores and shops and personal service establishments on the ground floor of buildings and office and residential dwelling units in upper floors. Permitted principal uses are retail stores and

shops that are permitted in the NC zone, personal service establishments that are permitted in the NC zone, general and administrative offices, professional offices, restaurants, cafes, luncheonettes and other eating and drinking establishments, instructional studios and fitness centers, banks and similar financial institutions, and other services and facilities. The residential dwellings are permitted as townhouses and multifamily dwellings in individual complexes separate from nonresidential land uses and affordable housing units over nonresidential uses in mixed-use buildings. Also permitted are 100% affordable housing buildings. There is a 12.5% minimum set-aside for affordable dwelling units.

The VC-2 Village Center Overlay is located on the south end of the Township, overlaying the HD zone along NJ Route 33. This district has similar goals to the VC-1 overlay. The requirements are nearly the same except that VC-2 requires a minimum tract size of 75 acres compared to VC-1's 50 acres. VC-2 also has different affordable housing requirements, with a minimum set aside of 20% of all residential dwelling units.

The Airport Safety Overlay Zone (ASOZ) overlays the area around the Old Bridge Airport, which is adjacent to a neighborhood commercial district in Monroe Township. In this district development is restricted in accordance with safety provisions including height restrictions and prohibited uses. Permitted uses are those of the existing NC district provided they are in conformance with the height regulations.

The Affordable Housing Mixed Use Development/Highway Development (AHMUD/HD) Overlay Zone establishes standards and requirements for mixed use development that includes a mix of market-rate housing and housing that is affordable to low and moderate-income households and nonresidential commercial and office facilities. The district is in the southern end of the Township, along NJ Route 33, overlaying a HD zone. The AHMUD/HD overlay permits all uses permitted in the HD district except for new auto sales, machinery sales and repair, wholesale, distributive and storage establishments, and highway development parks. The district also permits inclusionary housing developments of which 82.5% of units are market rate and 17.5% are affordable.

Land Use Trends

Residential Development

As discussed in the development trends section, Monroe has experienced significant residential development in recent years with over 4,600 new dwelling units constructed since 2009. This residential development has added a mix of detached single-family homes, townhomes and multifamily units to what was primarily a detached single-family residential and active adult residential type community. This residential development has put added pressure on the services that the Township provides to residents, particularly the educational facilities. With these additional units, it is important for the Township to implement plans to allow Monroe to provide the services and uses desired by new and existing residents.

It is clear that the current level of residential development shows the demand that households have for wanting to move to and live in Monroe. Recently, there have been significant changes to the real estate market in which greater numbers of families are either choosing to or are compelled to rent instead of own. One of the major factors to this is the increase in home prices outpacing the increase in household wages, which has been further exacerbated during the Covid-19 pandemic. The rise in home prices has made homeownership unattainable for some households and increased the amount of time other households need to save the money to purchase a home. There are additional reasons which have all resulted in the homeownership rate failing to reach the same level

that it was prior to the Great Recession.¹ As older millennials mature (as discussed in the **National Land Use Trends** section below), they are likely to bring rising demand for family-oriented rental housing. Monroe has seen a significant increase in families with children moving to the Township in recent years. While many of these families seek to buy homes, some may want or need rental options. While most of Monroe is zoned for single-family residential dwellings, recent zoning changes that have come as the result of the Township's 2016 Housing Element and Fair Share Plan have added additional housing types such as townhomes and multifamily units. These housing typologies are likely to be attractive to both households looking to buy and households looking to rent in the Township.

Given the projected development of new residential units, the Township will need to plan for these additional households through its land use, open space, circulation, and community facilities. New families are likely to bring school-aged children who will impact the already overburdened schools. As a result, the Township should work with the school district to plan for additional school facilities that will likely need to be added to help with the projected increases in the number of school-aged children. In addition to school facilities, new families moving to Monroe will also demand additional services such as new stores, restaurants, and parks. The consultant team reviewed

¹"Family Renter Housing: A Response to the Changing Growth Dynamics of the Next Decade". Urban Land Institute: https://knowledge.uli.org/reports/research-reports/2020/family-renter-housing?_gl=1*vp6zq1*_ga*MTQ0NzEzNjU1Ny4xNjMxMTAxNzU3*_ga_





the Township's land uses to provide guides and recommendations for how to control future land uses in a way that can suit the needs of new households moving to Monroe as well as existing residents. Additionally, the team incorporated strategies that would help to diversify the Township's tax base in order to lower the tax burden on households while still being able to pay for the projected increase in services needed for the additional population. These recommendations can be found in the **Future Land Use Guide** and the **Open Space Plan**.

Warehousing and e-commerce

The Covid-19 pandemic has intensified the increase in demand for warehousing developments as more consumers choose to shop online rather than at brick-and-mortar stores. Monroe's location in central New Jersey near the New Jersey Turnpike places it within a hotspot of warehouse development. In fact, the area along the New Jersey Turnpike Corridor has the highest demand for final-mile distribution facilities in the country.² As a result, there is increasing pressure on Monroe to accommodate more warehousing facilities. While warehousing facilities offer a chance for Monroe to increase and diversify its tax base and bring jobs to the Township, without careful consideration these facilities could adversely impact other important Township-wide planning goals. It is important for the Township to balance its need to diversify its tax base with maintaining a high standard of living for Township residents, by limiting impacts to residential neighborhoods from traffic issues and other potential downstream effects of additional warehouse development. To limit these impacts, Monroe should identify the best locations for warehousing facilities.

Redevelopment and reuse of existing sites is one potential option because it limits impacts to areas that already have industrial and commercial properties. While vacant retail and office spaces may seem like a potential source for warehouse conversion, there are deterrents that make such conversions difficult to accomplish. In such locations, the change in use can be difficult for nearby residents to accept. However, proactive planning and outreach to residents can help make this potentially necessary change more palatable.

Other considerations for accommodating warehousing facilities include permitted densities, sewer and water connections, and brownfield redevelopment incentives. In order to limit the amount of land taken up by warehousing, municipalities can update bulk standards for appropriate zoning districts to allow for taller buildings, which would allow for a greater amount of storage area on a smaller amount of land. Additional considerations are the various types of warehousing and distribution uses that have different impacts on the surrounding area. For locating warehouse facilities, Monroe's existing sewer and water infrastructure can be considered an asset in limiting impacts from warehousing development because the areas lacking connections would suffer the greatest from new warehouse developments. To promote redevelopment over greenfield development for warehouse facilities, Monroe can leverage state-provided loans and tax credits made available to developers of brownfield sites which help with the costs removing contaminants. One such program is the Hazardous Discharge Site Remediation Fund, which provides grants covering a portion of cleanup costs and can make redevelopment projects more feasible.

² "Planning the Final-Mile: The New Jersey Turnpike Corridor", October 2018, Colliers International.



An additional challenge planning for different warehousing uses is the growing diversity in what constitutes a warehouse use. As e-commerce has grown and matured as a market, warehouse facilities have specialized to provide different functions that fall under the larger logistics and warehousing market. The **Future Land Use Plan** section provides recommended definitions to help the Township address this trend.

Lack of Commercial Development

While Monroe's rural and suburban character is considered one of the Township's most attractive features, survey respondents and workshop attendees stated they would like to see more commercial opportunities. Many residents want to see more restaurants, grocery stores, and retail for both personal use and to increase the Township's tax base. Access to essential services and amenities is limited for much of the Township causing some residents to

drive excessively long distances, often to other towns, to meet their daily needs.

At the same time, residents want to preserve Monroe's character and limit traffic impacts. Monroe should identify strategies that can attract high-quality commercial development to key areas in the Township. A land use trend that has gained popularity in recent years is suburban communities wanting to create a "downtown" area with shopping, walkable streets and quality public spaces. This strategy could potentially alleviate the commercial development concerns and will be discussed in greater detail later in the land use element.

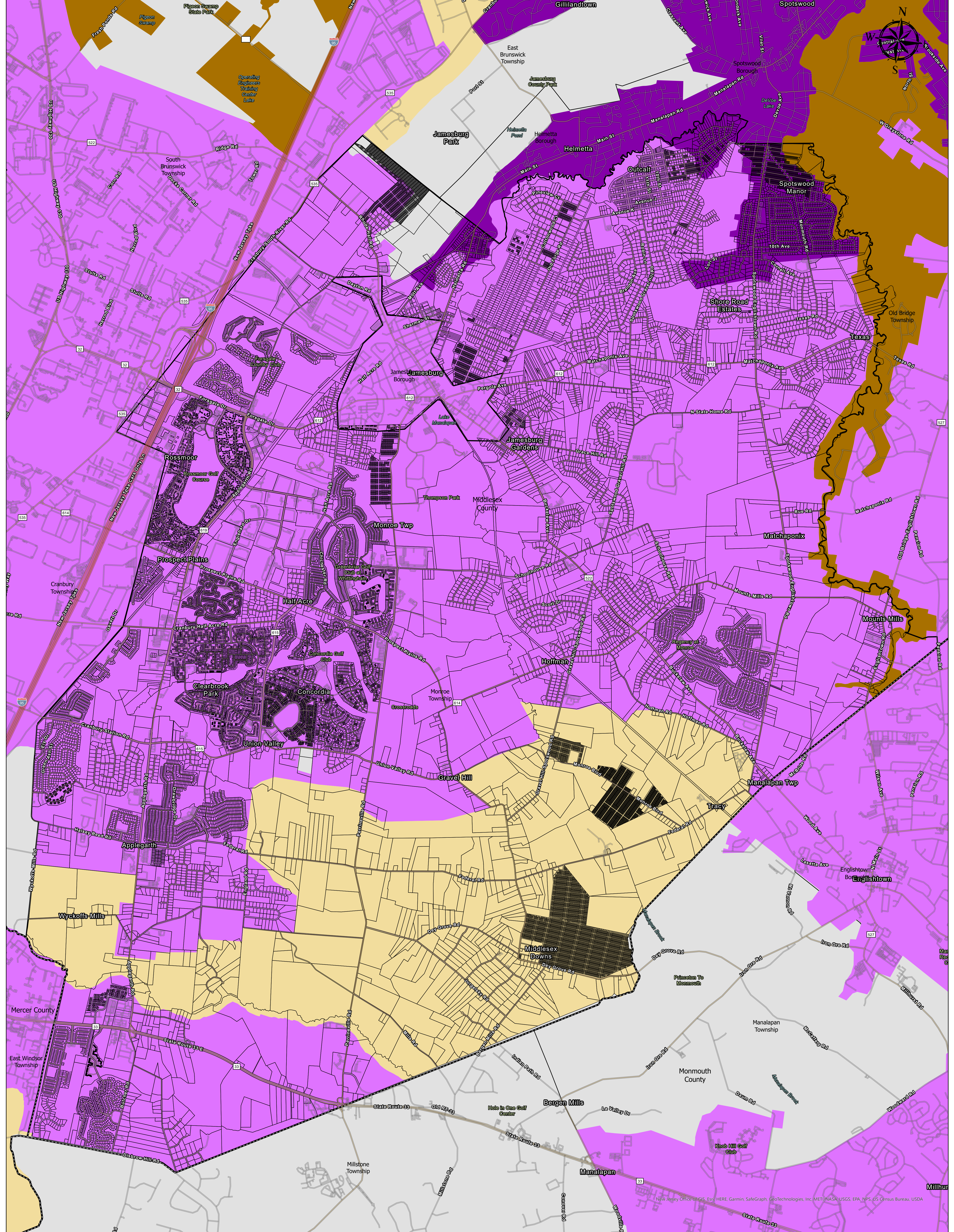


Loss of Rural Character

Rural character is related to the preservation of open space; the presence of woodlands, farmlands, water bodies, and other natural features and the absence of development are components to rural character. Like many municipalities in New Jersey, Monroe has seen many rural lands developed into suburban communities. This trend is a consequence of the Township's proximity to major population centers and its location at the center of the northeast corridor. Many residents were drawn to Monroe by its rural character and would like to maintain it rather than continue suburban development expansion.

Consequently, it is important that the Township develop effective strategies to balance the need to provide additional uses and services with the desire to preserve its remaining rural character. Additionally, it is important that the Township's land use policies align with the State Development and Redevelopment Plan, which designates a large portion of the southeastern area of the Township as a Rural Planning Area (PA4). The Township does this through its zoning code. The area that is a part of the PA4 is largely zoned for Rural Residential-Farmland Preservation (RR-FLP). This zone creates large minimum lot sizes and cluster development that attempts to preserve as much of the open space as possible. Monroe also attempts other strategies such as farmland preservation, open space acquisitions and other proactive planning measures. The Township should continue to its efforts to preserve rural character in the PA4 area to align with Township State planning goals.





- State Planning Areas**
- PA-1
 - PA-2
 - PA-3
 - PA-4
 - PA-5

Monroe Township State Planning Areas Map



New Jersey Office of GIS, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc., METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA

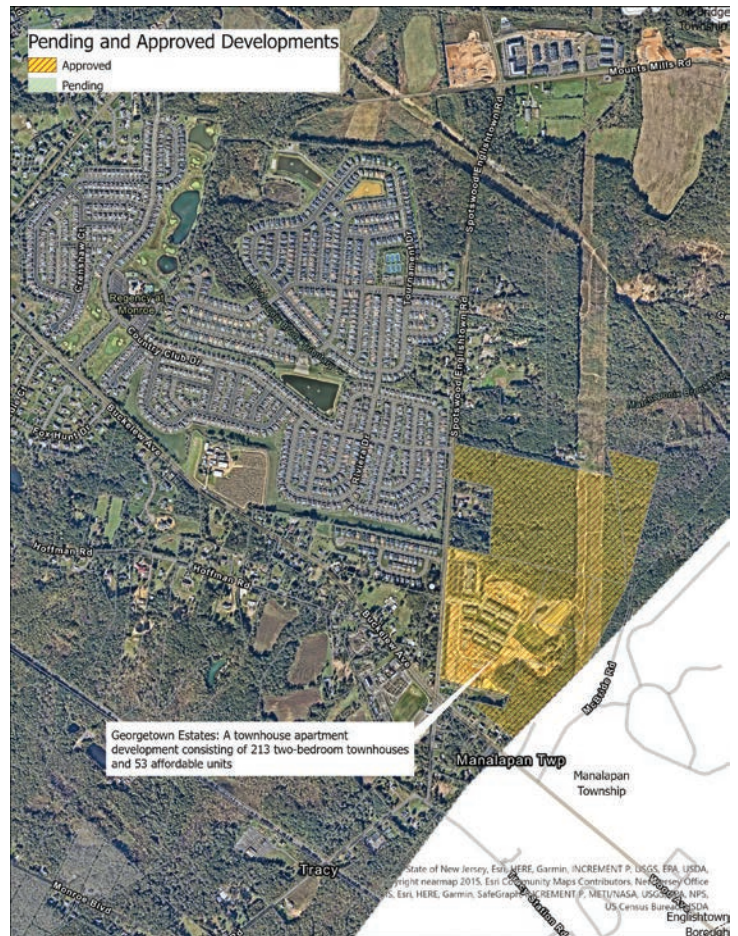
Development Constraints

As discussed in previous sections, constraints to development are both a challenge and an asset to the Township in achieving certain goals. Development constraints include wetlands and environmentally sensitive areas, preserved open space, flood hazard areas, preserved farmland, and limited extent of water and sewer infrastructure. Much of Monroe has at least one of these constraints present, restricting development to certain portions of the Township. This poses a challenge to Monroe in accommodating growth and development in the years to come. Much of the developable land is already built up, leaving only a relatively small amount of greenfield areas that are feasible for development. The Township will need to create strategies to guide development to key areas and discourage it in others.

Recent Land Use Changes and Projects in the Pipeline

Georgetown Estates

Georgetown Estates is a recently approved townhouse development consisting of 213 two-bedroom townhomes, 53 of which are affordable to low- and moderate-income households. This development covers the entirety of the R-ARAF district which is located along the southernmost part of Spotswood-Englishtown Road along the border with Manalapan Township. This development along with recent developments such as the nearby Regency at Monroe have changed this area of the Township from more rural development to suburban residential development. As a result, the Township may look to expand commercial opportunities in this area to meet the increase in demand coming from new residents moving into these developments.



Rhode Hall Road Warehouses

The Rhode Hall Road area has seen recent proposals for warehouse uses in the Rhode Hall Road/Cranbury South River Road Area. BEREP III Monroe, LLC received Zoning Board approval and construction on the site has begun for a warehouse use for Block 82, Lot 3.01 which has frontage on Cranbury South River Road. There is currently a proposal for warehouse development on Block 82, Lot 4.01 which has frontage on Rhode Hall Road. Both parcels are located in the R30 zone, but many of the surrounding uses are warehouse uses in South Brunswick. The approved and pending development proposals for warehouse uses in concert with the surrounding land uses may warrant a review of the zoning in this area of the Township. This would benefit the Township by preventing future developments from needing to go before the Zoning Board for use variances and help to diversify the tax base. Planning initiatives in this area of the Township should focus on minimizing the potential negative externalities such as truck traffic that come from warehouse uses and have an impact on residents that live in the nearby area.

Marketplace at Monroe

The Marketplace at Monroe is an approved mixed-use development in the AHMUD-HD zone on the north side of Route 33 consisting of retail, restaurants, day care, office space, and a supermarket. In addition, the development will include 558 townhouse units, 56 duplex units and 171 multifamily units. This development, projected to be built out over several stages, will add significant retail space as well as residential units. The commercial spaces are needed along this corridor given the increase in residential uses along the southern half of Monroe, concentrated around Route 33. Additionally, a supermarket is something that Township residents reiterated throughout the public outreach portion of the planning process. Going forward, it is important that the Township work to make this area connected with the other residential developments in the area through creating multimodal opportunities and attempting to create a Town Center along this corridor in Monroe.

National Land Use Trends

Downtowns as Centers of Place

Monroe residents have expressed a desire for more commercial development including restaurants, grocery stores, and other daily needs. Many suburban communities have responded to similar desires in their own communities by developing a downtown or village center district. Nearby examples include Plainsboro and Robbinsville, both of which have development histories and patterns in common with Monroe. While developing a dense village center in Monroe may at first seem incongruent with long-range goals of preserving the Township's rural character, concentrating development in one area will allow the Township to preserve other lands. This planning idea is something the Township may wish to consider as it could address desires and concerns raised by residents including wishes for more convenient access to retail and a more diverse tax base. Monroe also has several popular and successful examples to work from to create its own unique development strategy.

Suburban Downtown Examples

When asked about the potential for the Township creating a walkable town center area, 43% of residents responded that it is very important for the Township to do so and an additional 21% of respondents believing that it was important. Within the central New Jersey region, there are multiple examples of similar municipalities planning for and working with developers to create attractive, walkable town centers.

One of the most talked about developments is Washington Town Center in Robbinsville. The municipality was able to proactively work with the developer to create a town center that includes mixed-uses, community amenities, open spaces and attractive, walkable areas.

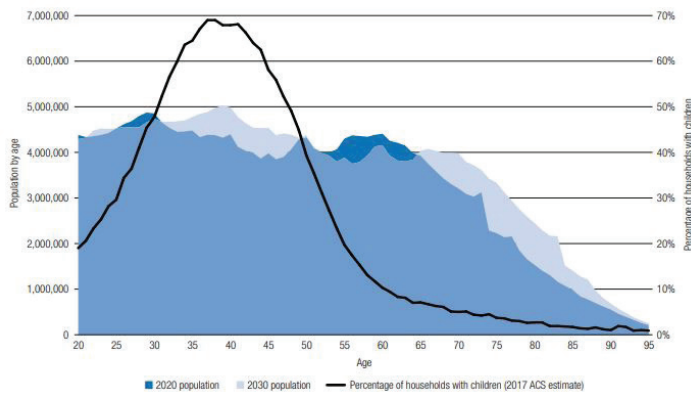


Nearby Plainsboro is another good example of a former rural/existing suburban community that proactively planned for the creation of a downtown/community center in an area of the municipality where this development type had not previously existed. Plainsboro Center includes a mix of development types including residential, commercial, office and community spaces. The Plainsboro Library is located within Plainsboro Center, which helps to anchor the area as a community center for a sprawling municipality.



Demographic Change

Demographic trends have a profound impact on the real estate market and land uses due to the demand that households of different ages and compositions have for different land use types. Demographers at the Urban Land Institute are pointing out that the millennial generation is reaching a demographic tipping point where members of the generation are entering prime child rearing years. According to the U.S. Census Bureau, the 30 to 50 age cohort is expected to grow by 8 percent over the next decade compared to less than 1 percent growth in the same age cohort over the previous decade.³

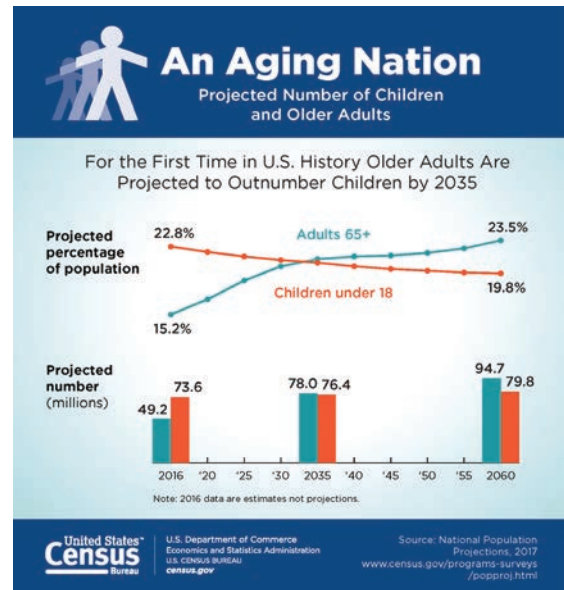


Source: Urban Land Institute

This demographic change over the coming decade is likely to have a large impact on Monroe Township. Housing that suits households with children is primed to be in increased demand over the previous decade. Given the preponderance of this land use type in Monroe and the high performing school district in the Township, demand for housing in Monroe is likely to stay at its current high level.

On the opposite end of the age spectrum, the Township reflects the aging of the population for adults over the age of 65. The U.S. Census Bureau projects that by 2030, one in five Americans will be 65 years or older and by 2035, the number of adults over the age of 65 will outnumber the number of children under the age of 18. However, Monroe is ahead of the nation in the percentage of the population that is above 65 years old. According to the 2019 American Community Survey 5-year estimate data, the over-65 population as a percentage of the Township's total population was

37.9%, which is slightly higher than the percentage in 2010 (36.0%), both of which are above the over-65 population in New Jersey, increasing from 13.5% to 15.9% over the same time period.



Monroe has many qualities, specifically its many retirement communities, that make it attractive to older adults. And while the Township has much to offer this population, New Jersey Future's 2014 report "Creating Places to Age in New Jersey" gave Monroe a score of 0 out of 4 on the quality of places for older populations. Their rating was based on measures of building densities, the presence of a mixed-use downtown, street connectivity and walkability, and local bus service. New Jersey Future's report was focused on accessibility for older adults and considered car-dependent development to be less accommodating for this population. The variables chosen were meant to reflect the ability for older people to live independently, to get out of the house, accomplish daily errands, and interact with others. Monroe Township provides many services to seniors to improve accessibility to the community including shuttle services, a senior center and a senior services department. The existing retirement communities provide their own services, ensuring that older residents are able to meet their daily needs.

³ "Family Renter Housing: A Response to the Changing Growth Dynamics of the Next Decade". Urban Land Institute: https://knowledge.uli.org/reports/research-reports/2020/family-renter-housing?_gl=1*vp6zq1*_ga*MTQ0NzEzNjU1Ny4xNjMxMTAxNzU3*_ga_HB94BQ21DS*MTYzZjQ5MjYwNi4xLjAuMTYzZjQ5MjYwNi4w.

Future Land Use Guide

The future land use guide has general recommendations to affect the Township's zoning code as a whole and areas of change recommendations to affect specific areas of the Township that would improve the existing land uses. General guides for future land use are as follows:

1. The Township is currently attempting to create mixed-use areas of Monroe to diversify its land uses and create popular destinations in the Township that can attract revenue from both residents and visitors from outside of the municipality. The Township can make changes to the existing zoning code to improve the likelihood that the desired mixed-use development comes to fruition. To reflect current increase in traditional mixed-use development building trends, the following terms should be included within the code:

ACTIVE GROUND FLOOR USE

Any use under the definition of "Active Use" within the first 30 feet of depth within a building as measured from any street facing façade.

ACTIVE USE

Any use that generates a high amount of pedestrian traffic. Active uses shall include art gallery; artisanal workshop; bar, tavern and nightclub; convenience store; grocery store; supermarket; service, business or personal; restaurant; retail; theater and similar uses. Office space, co-working, and residential uses shall not be considered to be active uses.

2. One of today's land use trends is the popularity of breweries and distilleries. However, it is important to consider the scale of the use and the surrounding uses to determine the appropriateness. For example, large-scale breweries and distilleries with their industrial processes are also not appropriate in areas where the Township intends to create a more walkable "town center". However, small-scale versions of these uses that eliminate the manufacturing process can be very effective in attracting visitors to mixed-use and commercial locations and should therefore be permitted.

The definitions for Brewpub, Distillery, and Microbrewery should be added to the Township Code. These terms should be defined as follows:

BREW PUB

An establishment that sells at least 25% or more of its product in-house and is accompanied by a restaurant area for dine-in use only.

DISTILLERY

An establishment required to be licensed as a distillery by the New Jersey Division of Alcoholic Beverage Control.

MICROBREWERY

An establishment required to be licensed as a microbrewery by the New Jersey Division of Alcoholic Beverage Control.

3. As discussed earlier, demand for warehousing and distribution uses has greatly increased in order to accommodate the rapid rise in e-commerce. Monroe Township's location makes the area a prime location for these types of uses. Consequently, it is important for the Township's zoning code to be updated with the various types of uses associated with warehousing and distribution. It is recommended that the Township add definitions for the following terms into the Zoning Code:

DISTRIBUTION

Facilities engaged in the receipt, storage, and distribution of goods, products, cargo, and materials, including trans-shipment by boat, rail, air, or motor vehicle. Distribution shall not include fulfillment warehouse/center(s).

FLEX SPACE

A building, or parts of a building, suitable for or capable of being changed to accommodate a variety of permitted uses and designed to be used on a short- or long-term basis.

FULFILLMENT WAREHOUSE/CENTER

Facilities involved in receipt of bulk products and the storage, separation, and distribution of said products on an individual basis to individual end user consumers (not retail). This use includes e-commerce activities.



SELF-STORAGE

A system whereby individuals rent containers or units of space within a large warehouse to store possessions, including outdoor storage of vehicles in the rear yard.

Areas of Change

Monroe Township has three distinct commercial zoning districts that allow for various types of retail and personal service establishments. These zones are the Neighborhood Commercial (N-C) District, the Community Commercial (CC) district, and the Highway Development (HD) district. Each of these zones comprises of slightly different uses and have varying degrees of success in accomplishing the goals of each zone. Based on public outreach efforts, residents would like to see additional commercial uses such as shops, grocery stores, and restaurants with a majority (~53%) of survey respondents saying would like to see new commercial uses in Monroe. The Township can do more with these zones to create high quality commercial and even mixed-use areas. It is important to reiterate and discuss the intent of these zones, their existing location in the Township, and the zones' existing bulk and use standards.

The Neighborhood Commercial District (N-C) is located in small zones scattered throughout the Township, adjacent to residential areas. This district permits retail stores of a neighborhood or daily-needs type, professional service establishments, eating and drinking establishments, and other services. The district requires developments to be designed as a unified commercial village with a single architectural motif

which is in character with the surrounding residential area. There are additional design requirements that promote accessibility and compatibility with the surrounding area and pedestrian-friendly design.

CC Community Commercial District comprises a very small portion of Monroe's total area. The district permits retail stores which serve community-wide needs, personal service establishments, eating establishments, and other services as well as business, professional, and medical offices. The same design requirements as the NC district apply to the CC district.

HD Highway Development District is in the southern region of the Township along New Jersey state highway Route 33. The district promotes a diverse mix of commercial and light industrial uses that have a regional market for goods and services reaching beyond Monroe's boundaries. Permitted uses are business and professional offices, corporate centers, theaters and other fully enclosed commercial entertainment establishments, regional shopping centers, new auto sales, wholesale storage establishments, and other services. Like the other commercial districts, HD requires design as a unified commercial village with a single architectural motif, which must be in character with the surrounding residential area.

An important note of the HD zone is that the Township has created overlay zoning districts to allow for the creation of inclusionary residential development in order to meet its affordable housing obligations as outlined in the Township's Housing Element and Fair Share Plan. These overlay districts cover significant portions of the existing HD zone. The overlay districts



Route 33 Corridor

The Route 33 corridor presents significant potential for retail commercial options. According to ESRI's Business Analyst, there is a projected \$300 million amount in potential retail sales within a 15-minute drive of the corridor in Monroe, which becomes higher within a 10-minute drive due to the current lack of retail options in this area of the Township. It is important to note that with the increase in residential development that the spending potential in this area will be higher than what the current projections show.

Retail Market Analysis Report

Retail Location 853 NJ-33 Monroe, NJ 08831	Retail Sales		
	Drive Time	Total	Potential*
	5 Min	\$56.5 m	\$220.3 m
	10 Min	\$729.0 m	\$1.2 bn
	15 Min	\$3.0 bn	\$3.3 bn

* The delta between actual sales in a market and market potential: positive = opportunity, negative = oversupply

add the inclusionary residential element onto the permitted commercial uses with the intention to create mixed-use areas along Route 33. There are some parcels that are not included in the inclusionary overlay districts, and the Township may want to revisit its zoning regulations to create opportunities for more pedestrian friendly commercial development given the location of these parcels in close proximity to the proposed residential and mixed-use developments that are likely to occur in order for the Township to meet its affordable housing obligation.

H2M conducted an analysis to show how these commercial zones performed based on the intents and regulations of the zones, paying particular attention to the surrounding land uses and circulation patterns. A discussion of these issues and prescribed changes is below.

The Marketplace at Monroe, as discussed earlier, is an approved mixed-use development located on the northern side of Route 33 just west of Perrineville Road that will tap into this extension retail potential by adding significant retail space in the area of the Township that currently lacks any. The development, once completed, will also add almost 750 residential units in compliance with the Township's affordable housing obligation. This is projected to add just under 2,000 new residents to this area, which will increase the demand for commercial uses such as those provided by the commercial component of the approved project as well as recreational services. The area on the north side of Route 33 will be nearly fully built out upon the project's completion and will help to transform the area into a new mixed-use corridor in the Township.

Moving forward, the Township should review its zoning districts and permitted uses to ensure that the uses are complementary and add to the transition that the area is undertaking. Once fully built out, the area will have a much greater amount of residential uses, primarily in the form of townhouse and multifamily development. The Township should attempt to utilize various planning tools to develop the area as a focal point for the Township. This would be complemented by creating connections through the residential and commercial areas that are being developed on the north side of Route 33. Plans to expand multimodal and open space accesses in this area are shown in the

map below. These proposed changes are discussed further in the Circulation and Open Space elements. The intent of these proposed changes such as the Millstone River Greenway and the proposed regional park in this area is to ensure an adequate level of open space and recreational opportunities to current and future residents in this area of Monroe Township. This ensures that Monroe residents will continue to be able to have a high quality of life for which the Township is known for.

The southern side of Route 33 is also currently zoned for both HD and a mixed-use affordable housing zone to meet the Township's affordable housing obligation. However, this area has not received a development application for development that complies with the mixed-use zone. The Township may want to consider changes to the zoning that would encourage more commercial or even light industrial development. This would require the Township to amend the Fair Share Plan to ensure that it remains in compliance with its affordable housing obligations. However, it is likely possible to identify other areas of the Township that would be able to accommodate additional residential units to ensure that the Township can utilize its zoning and existing infrastructure to encourage the most appropriate use along the southern side of Route 33.

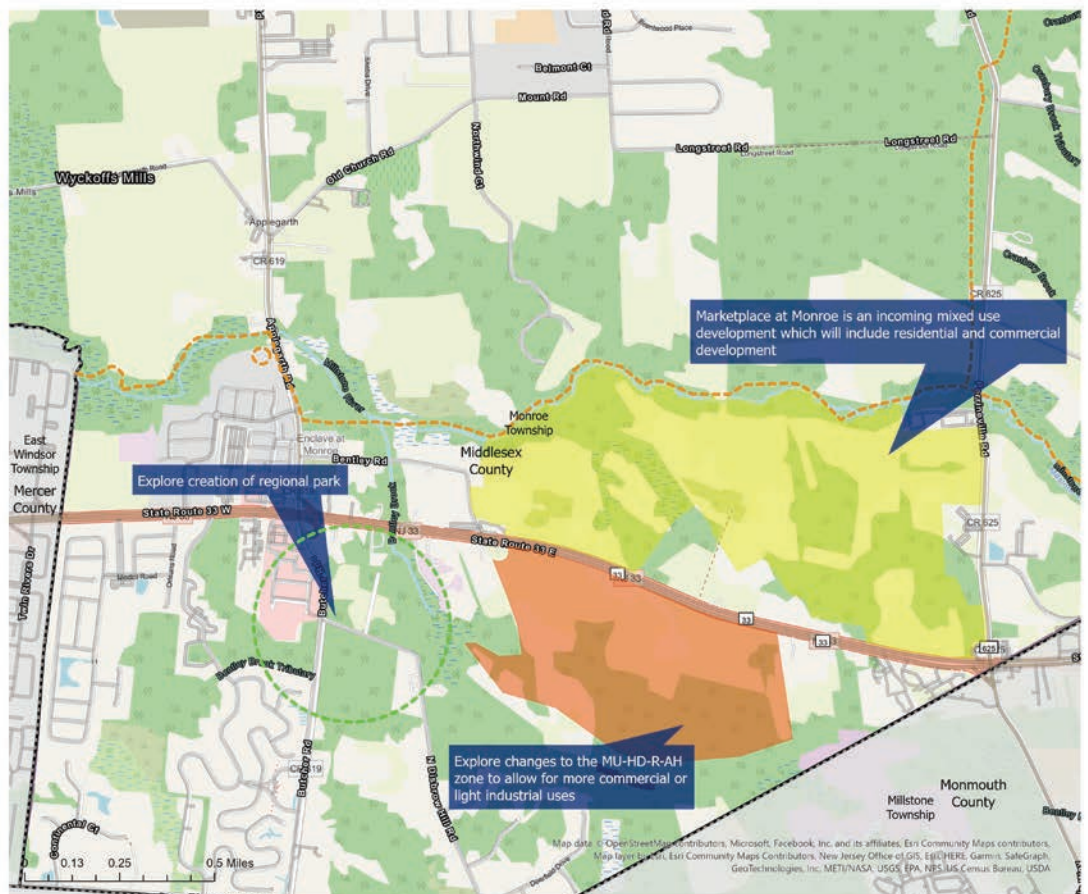
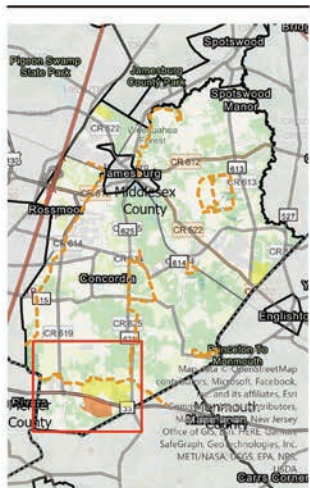
Spotswood-Englishtown Road

This area has a number of issues that the Township may wish to address to create a vibrant commercial corridor. Given the size and location of the zone in close proximity to residential areas, this area has the potential to create such a corridor. The southernmost area of the corridor consists of larger parcels with underutilized parking areas that should be considered for change. The existing uses include a commercial plaza that is not in accordance with current standards and is likely to further decline in the future. One option for this area would be to investigate whether to designate certain parcels in the area as an Area in Need of Redevelopment. There are areas further south along this corridor where some of the properties could likely satisfy the criteria for an Area in Need of Redevelopment or an Area in Need of Rehabilitation. In fact, the lots are small, and redevelopment of the lots utilizing conventional zoning poses a challenge. However, the lots can be consolidated through the redevelopment process.

Despite the existing conditions, the Spotswood-Englishtown Road corridor has the potential for the Township to create a traditional, small-scale mixed-use corridor within easy walking distance of the surrounding residential neighborhoods. In order to achieve this

Land Use Recommendations Commercial Recommendations

- MU-HD-R-AH Zone
- Marketplace at Monroe
- Municipalities
- Monroe Township
- All other municipalities
- Proposed Trails



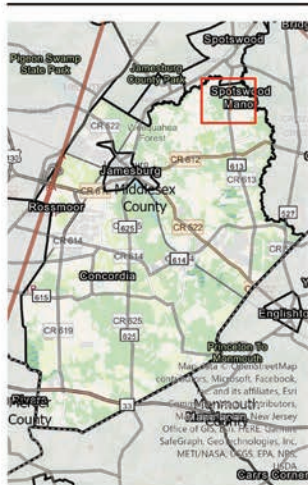
110 Clary Mill Road, Suite 110, Parsippany NJ 07054
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H 2 architects + engineers

Land Use Recommendations
Commercial Recommendations

- Future redevelopment study area
- Municipalities
- Monroe Township
- All other municipalities



119 Cherry Hill Road, Suite 100, Parsippany, NJ 07054
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Architects & Engineers

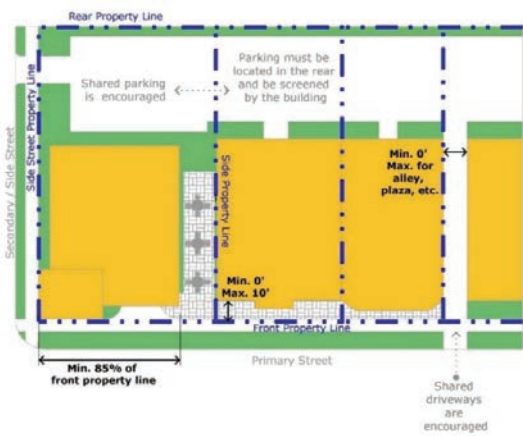


type of corridor, the Township may wish to implement zoning changes that encourages walkability such as a maximum front yard setback, property line coverage and encouraging parking to the rear of the building. This would bring buildings closer to the right-of-way and lowering the number of curb cuts, creating a more attractive, walkable environment. The Township could further improve the aesthetic quality of the corridor by inserting suggested development types and features into the zoning code (as shown on the following page). This can create a greater uniformity of development and attract residents to the corridor. These changes

would be able to work in tandem with a redevelopment/rehabilitation designation should the Township decide to pursue such an effort.

The sketches on the following page are examples of creating pedestrian friendly mixed-use redevelopment along Spotswood-Englishtown Road. The concepts on the following page are for representative purposes only and are not a proposed design. The concepts show how moving the building closer to the street combined with streetscape improvements creates an inviting walkable space that can be accessed by nearby neighborhoods that are within walking distance.





An additional issue is that there is a significant number of split-zoned lots in this area. Split zoning creates challenges for both property owners and the Township's land use boards due to jurisdictional issues. The Township should examine the zoning boundaries for this area to limit the number of split zoned lots.

Old Bridge-Englishtown Road

The Old Bridge-Englishtown Road area consists of larger lots that could support an increase in intensity in terms of the type of commercial uses that could fit this area. Demand for commercial uses are likely to change given the amount of residential development that is occurring in the area. This includes the Monroe Parke development along Mounts Mills Road that will include over 500 units once fully built out and Georgetown Estates, which will add another 200 units on Spotswood-Englishtown Road. Given the increased residential activity along Spotswood-Englishtown Rd and Mounts Mills Rd, new residents will look to have commercial services such as restaurants and retail within a relatively short distance. The existing NC zone along Old Bridge-Englishtown Road would fill this need. As a result, it is likely that this area could transition quickly to include more viable commercial uses.

Lower Matchaponix Road

The Lower Matchaponix Road area is an area of the Township where the current zoning does not match with the underlying conditions. This area is currently zoned Neighborhood Commercial (NC) while most of the underlying land uses are single-family residential. Consequently, the Township should evaluate the potential to rezone this area of the Township to the R30 zone to better reflect the existing conditions while ensuring that some portions of this area continue to remain in the NC Zone District to prevent creating non-conforming uses.

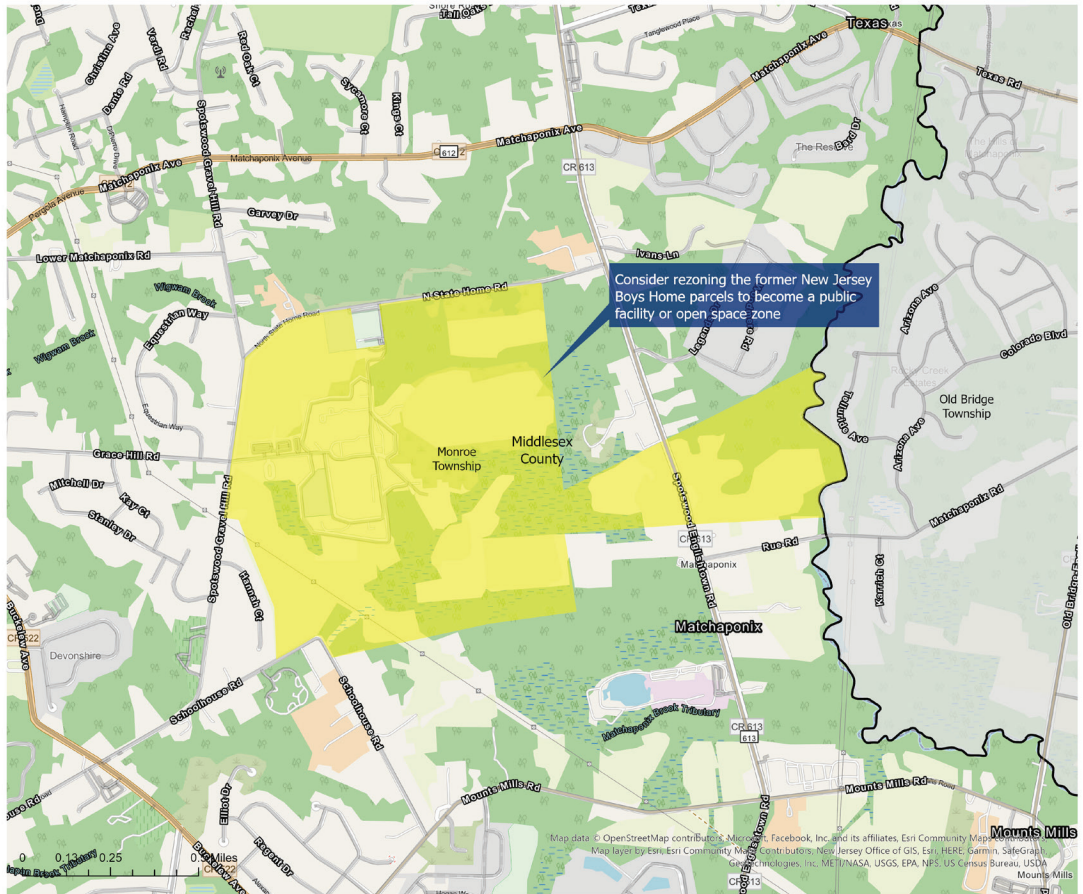
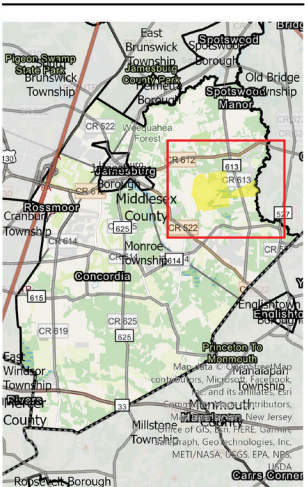
New Jersey Training School

The New Jersey Training School is located near the center of the Township off Spotswood Gravel Hill Road. Daniel P. Ryan Field also borders on the northern side. The state home property is nearly 500 acres in land area, which presents an opportunity that the Township should plan for in the scenario where the State of New Jersey no longer finds the existing facility useful. If this scenario does occur, the Township should utilize the Township's zoning ordinance to preserve the property for a public facility and/or open space use.

Land Use Recommendations
General Recommendations



- Former New Jersey Boys Home Municipalities
- Monroe Township
- All other municipalities



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Suite 101B,
Passaic, NJ 07654
P: 973.287.5900
F: 973.334.0507

800.955.1124
Avenel, NJ 07001
Avenel, NJ 07001
Wanaconda, NJ 07094
New York, NY 10956
Fairfield, NJ 07004
Hazard, NJ 07926

H2 architects
+
M engineers

The Township could also work with the State or to expand Daniel Ryan Field into the area currently owned by the school. The larger park could accommodate additional active recreation such as additional fields, playgrounds, etc. This would also be an opportunity for the Township to build out the open space for recreational purposes such as a trail loop around the property that would connect to Daniel Ryan Field as shown in the map.

Monroe's Office Zoning Districts

Monroe Township provides two office district zones that permit professional offices and related uses such as corporate offices, data processing facilities, medical offices and clinical laboratories, and other professional services. These districts are the Office Professional (OP) and the Planned Office Commercial District (POCD).

The main difference between the two districts is that the POCD zone also allows for commercial uses such as restaurants, sports and health facilities, and pharmacies. The main intention of the POCD is to zone for office parks and similar uses. The zone requires minimum lot sizes of 5-acre and 1-acre minimum lot sizes for internal lots but with the caveat that not more than 10% of the lots in the zone may be one (1) acre lots. The minimum site requirements for a Planned Office Park is 40 acres. The POCD requires large lot dimensions with 300 feet for lot frontage, 300 feet for lot width and 500 feet for lot depth.

In turn, the OP zone allows for only professional offices and other similar services. The OP zone requires smaller minimum lot sizes (1 acre) and smaller lot dimensions in addition to a maximum 30% lot coverage, and a 20-foot landscaped buffer is required on rear lots which abut residential use.

Both the OP and the POCD zones are located along the Township's western boundary with Cranbury Township near the Turnpike. The zones are near the Township's Light Industrial zones as well as planned retirement communities.

In addition to the OP and POCD zones, the Township recently created the POCD-AR-AH on the southwestern corner of the Cranbury Half Acre Road and Applegarth Road intersection in order to meet its state mandated affordable housing requirements. As a result, the POCD-AR-AH zone adds an inclusionary residential component to the POCD zone requirements. The POCD-AR-AH district requires mixed-use buildings which have non-residential uses on the first floor, with residential dwelling units being deed-restricted to permit

only senior citizen residents meaning the dwellings are to be occupied by at least one (1) person age fifty-five or over with some exceptions related to those divorced or widowed in accordance with the laws of the State of New Jersey. A minimum of 23.24% of the dwelling units shall be set-aside for affordable housing, with 13% affordable to very low-income households. The lots that are covered by this zone have been combined into a single parcel, but construction has not started on the lot. The site is still occupied by professional office buildings, a small shopping plaza and two standalone commercial uses.

The Township's office zones have two distinct issues that should be addressed. The first is the level of vacancy and the underutilization of the sites located within the office zone. The other issue with the office zones is the difference between the intent of the zone and permitted uses and the existing land uses for the zone.

The issue with vacancy and underutilization of the office zones is a part of a longer-term trend that is affecting suburban office zones throughout the state and country. This is due to the rise of remote work, which was a trend that was slowly increasing in the past several years and was supercharged during the Covid-19 pandemic that caused many office employees to work from home for the first time. It is likely that even as the prolonged pandemic subsides that the demand for office space will be less compared to pre-pandemic levels, which was already on the decline. The Township can plan for this current and future decline in demand for office space by creating zoning incentives that allow for the repurposing of vacant or semi-vacant office buildings. This could be done through expanding the type of permitted uses to allow for additional commercial or even light industrial uses such as small-scale warehouse and logistics centers. Monroe Township may also want to consider expanding the types of permitted office uses to ensure that rising in demand office types like life sciences and co-working spaces can occupy currently vacant office space. The Township may also want to explore the use of a redevelopment designation to incentivize new development that meets the current and future demands in real estate.

The separate issue with the difference between the intent of the office zone and what exists on parcels zoned for office uses is one that can be addressed in separate ways depending on how the Township would like to see the parcels developed. In the area of Applegarth Rd and Station Rd, the area is zoned for POCD but the area covers active farmland and

two parcels owned by the Township, one of which the Township uses as a driving range. The rest of the sites are improved with detached single-family residential uses. The Township may want to explore the regulations of the zone to see if there are specific requirements that are inhibiting new development from going on the sites. Because of the decreased demand for office space in the post-pandemic environment, it may be appropriate to create more flexible regulations for this zone regardless. This may be to allow greater commercial or residential uses to create a mixed-use area that could become an attractive, walkable area of town.

Rhode Hall Road Area

The Rhode Hall Road area is undergoing change with recent approvals for development that include a large age-restricted residential development (in the PRC-2 zone), a recently constructed warehouse (in the R30 zone), and a retail/commercial center among others. This area is likely to further change, which may warrant the Township to review the existing zoning in the area to better regulate how this area of the Township is changing.

One potential area to address is the increase in demand for warehouse and/or logistics facilities. Currently, Monroe's Light Industrial (LI) zones are primarily concentrated along the western most areas of the Township as these areas of the Township have the best access to the New Jersey Turnpike and Route 130. Demand for uses in the zone is extremely high as evidenced by the region's low vacancy rate for warehousing facilities and the numerous applications for warehouse facilities. While there are few opportunities for an expansion of this zone given the existing development pattern in the Township, there are potential changes that could occur to accommodate. Much of the area is currently zoned R30, but recently approved developments suggest that the area may be transitioning from an agricultural area to a light industrial area.

Open Space Zone

In addition to the previously discussed zone changes, it is recommended that Monroe Township create a new zone district called the Open Space (OS) zone. This zone would encompass all the existing Township, County and State parks and open space parcels in Monroe to protect them from potential development. The zone could also be strategically utilized to protect publicly owned vacant land from development and ensure future use as a park or open space parcel.

Planned Residential Golf Community (PRGC) Zone

The existing PRGC zone is located off Forsgate Drive on the western end of the Township and close to the New Jersey Turnpike exit. The area currently has golf course and residential uses within the zone as these uses are the only principally permitted uses. Given the changing needs of the golf club to become more of a regional event center, it may be appropriate for the Township to permit a hotel use in the PRGC zone. Based on the surrounding uses and access to the Turnpike, a hotel use could be accommodated within the zone and could help with the continued economic viability of the golf course.

Storm Resiliency, Smart Growth, Environmental Sustainability

The Municipal Land Use Law (MLUL) requires a Land Use Plan element, of which it shall provide the rational basis and justification for municipal regulations. As it pertains to this section of the Land Use Plan, N.J.S.A. 40:55D-28 of the MLUL requires that the Land Use Plan shall:

(f) *include, for any land use element adopted after the effective date of P.L.2017, c.275, a statement of strategy concerning:*

i. smart growth which, in part, shall consider potential locations for the installation of electric vehicle charging stations,

ii. storm resiliency with respect to energy supply, flood-prone areas, and environmental infrastructure, and

iii. environmental sustainability; and

(g) *show the existing and proposed location of public electric vehicle charging infrastructure.*

The below includes this statement of strategy.

Smart Growth

Smart Growth plans for development that attempts to curb “suburban sprawl” and lessen the negative impacts on the environment. There are several environmental benefits of smart growth, including:

- Reducing vehicle miles traveled and decreasing greenhouse gas emissions
- Incorporating environmental awareness into land use decisions
- Conserving areas for natural processes of water absorption and filtering
- Creating links between neighborhoods and areas set aside of for nature-based recreation

In Monroe Township, there are various examples of suburban sprawl in the development of the Township. The recommendations of this master plan attempt to incorporate the principles of smart growth to both allow for future development that highlight the environmental benefits of smart growth and to improve upon the existing built environment. The plan calls for several improvements upon the existing development pattern including to create linkages between existing and future developments, preserve the Township’s environmental resources and to explore opportunities for future growth

to be located in the built-out areas of the Township. An additional step that the Township can take to promote sustainability and smart growth is to encourage the use of electric vehicles.

Electric vehicles represent a shift to more sustainable resources and zero vehicle emissions for personal automobiles, commercial fleets, and government vehicles (i.e. garbage trucks, street sweepers). These electric vehicles operate on battery power only, negating the need for gasoline usage. Rather, their mileage is determined based on the charge of the battery.

One of the major barriers to greater electric vehicle adoption is concerns about access to charging. The existing trend is that most charging for electric vehicles occur at the home of electric vehicle owners. This poses a challenge for residents of multifamily developments where residents are dependent on the owner of the development providing for adequate electric vehicle charging stations. However, there are scenarios where an electric vehicle would need to be charged away from the home such as on a long trip, after a long commute and various other events.

Recent actions at the state level have been taken to address these accessibility issues. On July 9, 2021, Governor Murphy signed into law the Electric Vehicle Charging Station Law which aims to incentivize the installation of Electric Vehicle Charging Stations (EVCS). The Department of Community Affairs (DCA) recently released a model ordinance to guide municipalities on how to implement the law. Provisions of the law include:

- EVCS are permitted accessory uses in all zones and do not require a variance to be included in any development application
- Parking facilities of any multifamily development that includes more than five units must reserve 15% of parking spaces to be Make-Ready, with a six-year phase in period.
- A Make-Ready parking space will count as two spaces when calculating a development’s compliance with minimum parking requirements, up to a maximum 10% reduction.
- A “Make-Ready” space is pre-wired with the electrical infrastructure to facilitate the future installation of an EVCS

Monroe currently does not have an ordinance related to electric vehicles or electric vehicle charging station, and adoption of this ordinance could help to further increase the usage of electric vehicles among Township residents. It should be noted that the model statewide ordinance is mandatory and supersedes existing ordinances.

Storm Resiliency

“Resilience is the ability to prepare and plan for, absorb, recover from, and more successfully adapt to adverse events.”

Source: National Academies of Science

Infrastructure plays a critical role in storm resiliency and in turn creates numerous benefits for the community. Advances in green infrastructure are improving communities’ ability to prevent flooding and pollution runoff during increasingly frequent wet weather events. The Environmental Protection Agency (EPA) defines green infrastructure as “...the range of measures that use plant or soil systems, permeable pavement or other permeable surfaces or substrates, stormwater harvest and reuse, or landscaping to store, infiltrate, or evapotranspire stormwater and reduce flows to sewer systems or to reduce surface waters”. Green infrastructure plays a critical part in stormwater management to help reduce stormwater flows and the ability of pollutants and harmful toxins from entering into critical watersheds.

On October 25, 2019, NJDEP adopted new stormwater rules (N.J.A.C. 7:8) to replace the current requirement that major developments incorporate nonstructural stormwater management strategies to the “maximum extent possible” to meet groundwater recharge standards, stormwater runoff quantity standards and stormwater runoff quality standards, with a requirement that green infrastructure be utilized to meet these same standards. The new rules went into effect on March 2, 2021.

Environmental Infrastructure

Green Stormwater Infrastructure (GSI) is an adaptable term used to describe an array of products, technologies and practices that use natural systems or engineered systems to enhance overall environmental quality and provide utility services. As a general principle, green stormwater infrastructure techniques use soils and vegetation to infiltrate, evapotranspiration, cleanse, and/or recycle stormwater runoff and help resolve environmental issues related to non-point source pollution, water quality and storage. These

technologies can simultaneously help improve air quality, reduce energy demands, mitigate urban heat islands, and sequester carbon while also providing communities with aesthetic and natural resource benefits. Some examples of low-impact techniques of green stormwater infrastructure include rain gardens, swales, porous or permeable pavers, and rooftop gardens.

Ideally, all subdivisions and site plans subject to Township approval should include the use of green stormwater infrastructure and continue to use non-structural best management practices (BMPs) identified in the NJ DEP Stormwater Best Management Practices Manual and Monroe should offer applicants design standards and siting and maintenance guidance for green stormwater infrastructure, such as porous pavements and rain gardens to capture building runoff. Due to the vulnerability of certain areas of the Township to flooding and other areas that are environmentally sensitive, it is critical to have the stormwater infrastructure in the built-out places of the Township to prevent the polluting of local waterways from runoff containing toxic and harmful materials.

Parks are also an ideal place to install highly visible demonstration rain gardens and other green infrastructure facilities. There have already been rain gardens installed by Rutgers University at the Community Garden and Senior Center.

Buildout Analysis

A buildout analysis creates a projection of a community’s maximum development potential based on a community’s existing land use conditions, parcel layouts, environmental constraints, and zoning regulations. The analysis provides insight to the future needs of the community and can aid the community in developing strategies to manage growth. This Land Use Plan includes a build-out analysis for Monroe, which considers the Township’s existing zoning district regulations, available developable land, environmental constraints, preserved lands and open space, and recently approved and proposed developments. This exercise will provide a high-end yet realistic projection of Monroe’s maximum development potential for the next ten years based on existing conditions.

Tax parcel data was gathered and analyzed to identify existing vacant lands within residential zoning districts. Some vacant parcels were found to be not realistically developable due to their shape, size, or location, and were removed from the analysis. The remaining lots were clipped to remove those constrained by flood plains and wetlands, with a 150-foot buffer distance

created for wetlands. Parcels were identified by their existing zoning district, and applicable regulations were applied to estimate a realistic maximum number of residential units that could be developed in the Township. The resulting figure was reduced by 25% to account for space that is typically needed for infrastructure, roads, stormwater management, etc.

Below is a summary of the results of the buildout analysis. Greater details of the specific areas of projected development can be found in **Appendix D**.

Summary of Buildout

Aside from currently approved and pending projects, there is limited room for potential residential developments. If zoning regulations remain as they are at the time of writing this Plan, there is a projected maximum of 2,440 additional dwelling units that could be added through greenfield development. This suggests that Monroe will continue to see residential growth through the approved developments JSM at Applegarth, Marketplace at Monroe, and Georgetown Estates among other not yet approved projects in order to fulfill its state mandated affordable housing requirements. Outside of these major residential developments, the Township will have little developable land for significant development activity. As a result, the Township should begin to consider infill development utilizing redevelopment and other changes to the zoning code to create opportunities to provide the types of services and land use types that could accompany future residential development.

Monroe's remaining undeveloped land is currently zoned to include districts that allow multiple types of uses. Among these uses, found in both residential and non-residential districts, is agriculture. As such, the Township's future land use plan aims to address how to balance competing goals and objectives. Projections discussed earlier in this land use plan indicate that there will be demand for commercial and light industrial uses. Redevelopment of underutilized parcels represents an opportunity to both meet the demand and to improve the Township's built environment through creating greater connectivity and overall improved design.

It should be noted that while this analysis provides realistic estimations, some factors were left out which could alter the actual future land uses in Monroe. Among these are availability of public infrastructure, market forces, individual site design choices, future open space acquisitions and dedications, and population and demographic changes.



Climate Change Vulnerability Assessment

On February 8, 2021, Governor Murphy signed into law an amendment to the Municipal Land Use Law (N.J.S.A. 40:55D-28) requiring any Land Use Plan Element to include a Climate Change-Related Hazard Vulnerability Assessment. This section was completed using FEMA best management practices for hazard mitigation planning and is consistent with the New Jersey's 2021 Climate Change and Resiliency Strategy.

The Assessment is required to include:

1. Analyze current and future threats to, and vulnerabilities of, the municipality associated with climate change-related natural hazards including but not limited to increased temperatures, drought, flooding, hurricanes, and sea-level rise.
2. Include a build-out analysis of future residential, commercial, industrial, and other development in the municipality, and an assessment of the threats and vulnerabilities identified in (1) above related to that development.
3. Identify critical facilities, utilities, roadways, and other infrastructure that is necessary for evacuation purposes and for sustaining quality of life during a natural disaster, to be maintained at all times in an operational state.
4. Potential impacts of natural hazards on components and elements of the Master Plan.
5. Strategies and design standards available to reduce or avoid risks associated with natural hazards.
6. Policy statement on the consistency, coordination, and integration of the climate-change related hazard vulnerability assessment with any existing or proposed natural hazard mitigation plan, floodplain management plan, comprehensive emergency management plan, emergency response plan, post-disaster recovery plan, or capital improvement plan.

The Township of Monroe is an outer-ring suburban community which is a mix of residential, light industrial and agricultural with a significant amount of land area constrained by wetlands. Monroe Township is located in southern Middlesex County along New Jersey's coastal plain. The eastern side of the Township is bordered by Matchaponix Brook, a tributary of the South River, which forms the boundary between

Monroe and Old Bridge Township. The Millstone River and several of its tributaries flow through the township. The Manalapan Brook flows through the Township into Lake Manalapan from the southerly portion of the Township. Monroe can be described as generally flat, with little change in elevation throughout. Land use in the Township is primarily residential, and is spread out with no clearly defined downtown area. Many wetlands areas are found in Monroe, which tend to be concentrated more in the southern region of the Township.

- Portion identified as FHA – acreage
- Proportion of that that is publicly vs privately owned
- Number of properties and structures in 100-yr and 500-yr floodplain based on Flood Insurance Rate Map (FIRM)
- Population, building, and critical facilities in floodplain
- Current and most significant future threats
- Non-threatening hazards
- Sea level rise

The Township is home to tree lined streets and a mix or rural and suburban development typologies. One defining feature of the Township is the amount of wetlands and watersheds that exist in the relatively flat terrain. There are portions of the overall municipality within an identified Flood Hazard Area (FHA) totaling approximately 6.3 square miles in area, or roughly one-sixth of land area in Monroe. However, the overwhelming majority of these areas remain undeveloped due to the Township's regulations. As a result only 6.4% of land area that is privately owned or vacant is located within the flood hazard area, significantly decreasing the potential for property damage as a result of flooding. Based on the most current FEMA derived effective FIRM at the time of the Middlesex County Hazard Mitigation Plan (HMP) dated September 19, 2014 there are approximately 337 structures and 2,035 properties located in the 100-year (1%) floodplain and 500-year (0.2%) floodplain. Additionally, only a very small percentage of Monroe's population, buildings, or critical facilities are within a floodplain. As such, the current and most significant future threats include thunderstorm, severe storm, hurricane/tropical storm, and nor'easter/severe winter storm related threats. This report also addresses drought and increased temperatures as

required above, however these were not identified as major threats to Monroe. Sea level rise will not have a major impact on Monroe since the Township is located further inland away from bodies of water that would be directly affected by sea level rise. However, the location of Monroe makes it susceptible to changes in the climate that make future tropical storm events more severe as has been seen with Tropical Storm Henri.

Analysis of Current and Future Threats

Monroe is located in southern Middlesex County and is generally not subject to coastal related natural hazards like sea level rise or storm surge due to its inland location. However coastal storms like Hurricanes present a high impact hazard as it relates to wind and rainfall impacts because of the tree lined streets along with existing watersheds and significantly wooded residential lots throughout the community. As such, High-winds, Severe Storms, and Ice/Winter Storms have the highest potential to impact Monroe. Flooding and dam/levee failure are also identified as high impact hazards; while no Severe Repetitive Loss properties are in Monroe, flooding is likely to pose the most consistent threat in the community and is medium ranked hazard for the community because of the areas within the Township located in the floodplain. Based on the 2016 Middlesex County Hazard Mitigation Plan (HMP) the following natural hazards are of high or medium priority in terms of mitigation for Monroe:

Increased Temperatures/ Extreme heat and Cold

While not identified as one of the major threats to Monroe according to the 2016 Middlesex County Hazard Mitigation Plan, addressing increased temperatures is a requirement of P.L.2021, c.6. According to the National Oceanic and Atmospheric Administration (NOAA) National Centers for Environmental Information, New Jersey's annual average temperatures have increased by 3° over the past century, and it is predicted that heat waves will become more intense in the future. While temperatures are variable on a year-to-year basis; for example if you were to compare 2019 to 2020 there is not that much of a difference, however when looked at over a period of 100 years or more it is evident that there is an overall increase in temperature as shown in Figure 2.1 on the following page as prepared by NOAA in 2016. This analysis has been corroborated by the New Jersey State's Climatologist office who put forth an analysis in January of 2021. This analysis shows that since 1885 70% of the five highest temperature months have occurred since 1990. This same study shows that none of the top five coldest months have happened since 1990.

Typically, hazard mitigation planning addresses extreme heat or extreme cold as it relates to National Centers for Disease Control extreme events. In this case the 2016 Middlesex County HMP identified both extreme heat and extreme cold as medium concerns, meaning they have a high annual probability of occurrence, but impacts are expected to be limited.

Table 2.4: Natural Hazard Priority Level

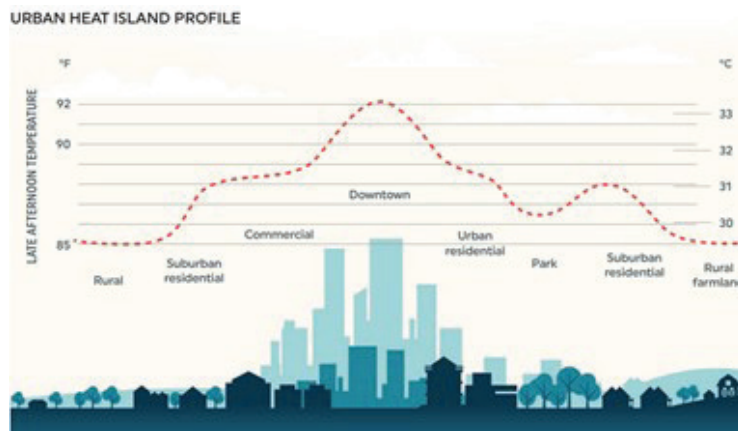
Hazard	Priority Level
Dam/Levee Failure	High
Flood	High
Hurricane and Tropical Storms	High
Nor'easters	High
Power Outages	High
Winter Storm	High

Occurrences of Extreme Temperature

The 2016 Middlesex County HMP identified that there were 14 instances of excessive or extreme heat events from 2001-June 2015 and 19 cold/wind chill events and two extreme cold events during the same period. Middlesex county has a probability of experiencing one extreme heat event and one extreme cold event approximately every 1.3 years.

Vulnerability Mitigating Risk

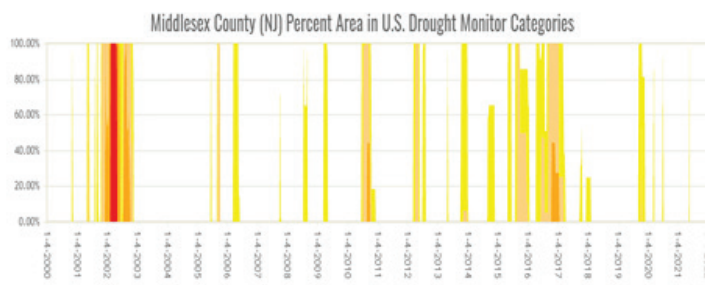
As indicated above, excessive heat or cold is not a major health threat in Monroe. In accordance with data gathered from the NJ Climate Change Resource Center at Rutgers University, Monroe can expect to see temperature increases of up to 10 additional days of heat in excess of 95° through 2030. These conditions can be exacerbated with the heat island effect which is more prevalent in highly urbanized communities. Monroe has a significant amount of tree cover and green spaces. However, as future growth happens, Monroe should take careful consideration to balance growth with the inclusion of green spaces including trees and other vegetative cover. The 2016 Middlesex County HMP identified both extreme cold and extreme heat events to be medium risk hazards.



Drought

NOAA defines drought as “a period characterized by long durations of below normal precipitation. Drought conditions occur in virtually all climatic zones, yet characteristics of drought vary significantly from one region to another, relative to normal precipitation within respective regions. Drought can affect agriculture, water supply, aquatic ecology, wildlife, and plant life. Drought is a temporary irregularity in typical weather patterns and differs from aridity, which reflects low rainfall within a specific region and is a permanent feature of the climate of that area.”

According to NOAA's National Integrated Drought Information System database, Middlesex County has experienced one extreme drought event in the period from 2000 to 2021.



Droughts are characterized between D1- Moderate Drought to D4- Exceptional Drought. Since 2000, Middlesex County has experienced ten drought events. Of those 10, six were moderate droughts, three were severe droughts and one was considered an extreme drought.

Table 2.5: Monroe Projected Temperature Increase

Year	Moderate Emissions (RCP 4.5)			High Emissions (RCP 8.5)		
	2030	2060	2090	2030	2060	2090
Change in Days Above 95 Degrees (Days)	+5 to +10	+11 to +20	+11 to +20	+5 to +10	+11 to +30	+31 to +50
Change in Cooling Degree Days (Degree Days)	+200 to +400	+400 to +600	+600 to +800	+200 to +400	+600 to +800	+1200 to +1400
Change in Max. Temp. July (° F)	+1° F to +3° F	+3° F to +4° F	+4° F to +5° F	+2° F to +3° F	+5° F to +6° F	+8° F to +10° F
Average Max. Temp. July (° F)	86° F to 90° F	86° F to 95° F	91° F to 95° F	86° F to 90° F	91° F to 95° F	91° F to 100° F

In New Jersey, winter storms include blizzards, snow storms, and ice storms. Nor'easters are also a common type of storm that may occur during winter months within the State of New Jersey. Winter weather impacts include lost productivity, traffic accidents, downed trees, medical events (such as heart attacks), and hypothermia (which rarely causes any significant or long-term problems). Traffic accidents and road closures due to wintry conditions are the most likely to cause damage. Projecting future vulnerability to Monroe from winter weather events are difficult due to climate change. As the State's 2019 Hazard Mitigation Plan describes, there are two climate change trends affecting winter weather. On the one hand, rising temperatures in New Jersey are likely to decrease the number of days when the temperature is cold enough for winter weather, but on the other hand, the New Jersey climate has gotten wetter. As a result, there are likely to be fewer winter storms, but the intensity of those storms are likely to be greater. This is what the state experienced during the previous snow season where the area was hit by multiple large snow storms that generated the above historical average snowfall that much of the state, including Monroe felt. In order to mitigate the adverse impacts of winter storm events, the Township should ensure that there is adequate green space and vacant area where snowfall during a winter storm can be cleared off the roadways by the Township's public works personnel. It is also important that the Township maintains adequate roadway and sidewalk widths to have enough area for snowplows to be able to deposit the snow from the main driving area of the roadway during a winter storm event.

Wind Damage

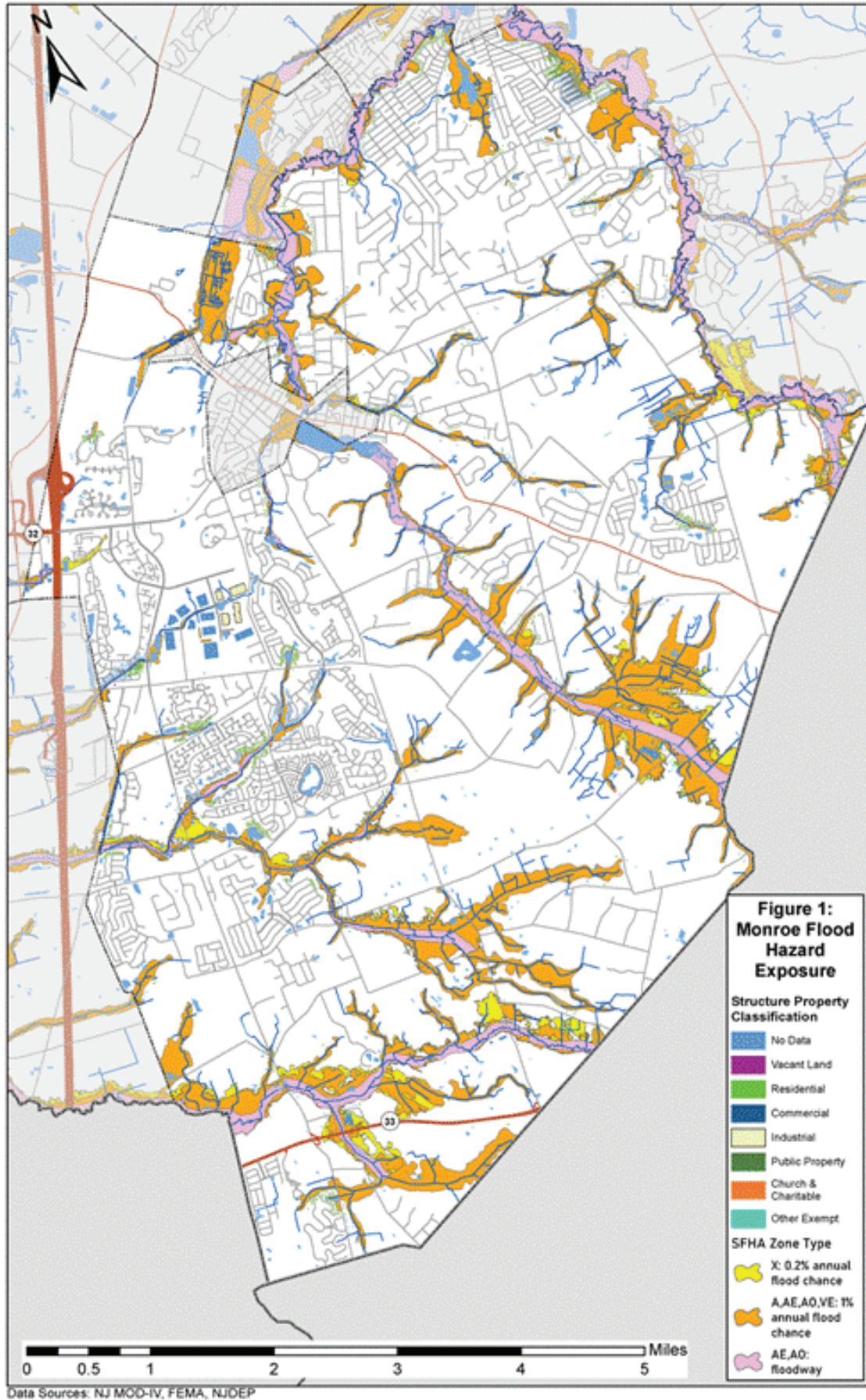
Significant damage can occur from high winds associated with severe weather events like hurricanes, nor'easters, tropical storms and winter storms. FEMA classifies this threat as high wind – straight line wind hazards and the threat is uniform across Middlesex County and is discussed in greater detail in the Middlesex County Hazard Mitigation Plan. There are no wind hazards from severe storms that are unique to Monroe. Previous occurrences and the probability of future events are the same for Monroe as for Middlesex County. For additional information at the County level, please refer to Section 4 of the Middlesex County Hazard Mitigation Plan for that information at the County level.

Wind Damage Impacts and Vulnerabilities to the Hazard

Monroe Township is a typical residential community, predominated by balloon-frame and unreinforced masonry residential structures, the majority of which have gable or hip roofs. As discussed in the Middlesex Hazard Mitigation Plan, wind profiles in this area of the country indicate a negligible potential for severe events, and adequate construction techniques and building codes have generally sufficed to keep risks low. There are two main sources of potential wind damage in such communities: (1) structural damage to residential and non-residential buildings, and (2) power losses, mainly due to trees falling on above-ground lines. There are established methodologies for completing general risk assessments for these hazards.

There are several recommendations that the Township could adopt to mitigate the potential damage from high winds in a severe weather event. The Township should adhere to the most up-to-date building codes to ensure the highest quality of construction. The Township should have an active tree inventory that includes an assessment of tree conditions and a prioritization list for trees that should be removed given their potential to cause damage to utilities and structures in a high wind event. The Township's current zoning code requires that all utilities be installed underground within easements or dedicated rights-of-way. However, portions of the Township were developed prior to this ordinance taking into effect, resulting in areas of the Township having utilities above ground. Where feasible, the Township should move existing utilities underground to make them less susceptible to outages in high wind events. The Township should also have backup generators for all critical facilities.

Flood Hazard - High (H) Hazard



There is localized flooding during storm events, such as severe thunderstorms, nor'easters, and sometimes hurricanes / tropical storms in Monroe. Though flooding occurs throughout the Township, property damage is rare; most of the flood areas are free of buildings and structures and are located along the several streams, tributaries, and brooks. However, there is one residential area that is prone to flooding, and it is located in the far northeast corner of the township. This area adjacent, to the Matchaponix Brook, includes roughly forty to fifty residential properties, with about half of them being entirely within the flood zone. The flood zones extend down the streets. This area can be identified as being on local streets Ashmall Ave, Tyndale Ave, Forest Park Terrace, and Carlton Ave.

Other areas with significant flooding include the area between Federal Road and Monroe Boulevard, along State Route 33, and two areas in Rossmoor. The Federal Road/Monroe Boulevard area contains mostly vacant land, but there are several properties used for commercial purposes and/or farming in the flood zone. The State Route 33 flood area consists of several commercial properties, and it is worth noting that the 1% and 0.2% year flood hazard area covers a portion of Route 33. Rossmoor is an age-restricted active adult community located in the western side of Monroe. On the northern end of Rossmoor there are roughly forty buildings located within the 0.2% annual chance flood hazard area. There are also several buildings within the 1% annual chance flood hazard area on the southern end of the community.

One of the best resources for determining flood risk in a jurisdiction is Flood Insurance Rate Maps (FIRMs), which are produced by FEMA. The FIRM is the official map of a community on which FEMA has delineated both the special flood hazard areas (1% annual chance of flooding) and the risk premium zones applicable to the jurisdiction. The effective FIRM date for Middlesex County is July 6, 2010, though the Middlesex County Hazard Mitigation Plan was developed in 2015, and at the time the best available flood mapping was the Preliminary FIRM released on January 30th, 2015, which is shown on page 66.

Current FEMA guidance uses the term extent as analogous to potential severity. The extent of the flood hazard in Monroe is relatively minor. The areas discussed above have experienced fairly shallow and low-velocity flooding at various times in the past, and in this case this is the best indicator of extent in the future. The most flood-prone areas of the jurisdiction can expect to experience flooding of a foot or two maximum (occasionally), with more frequent rain events causing

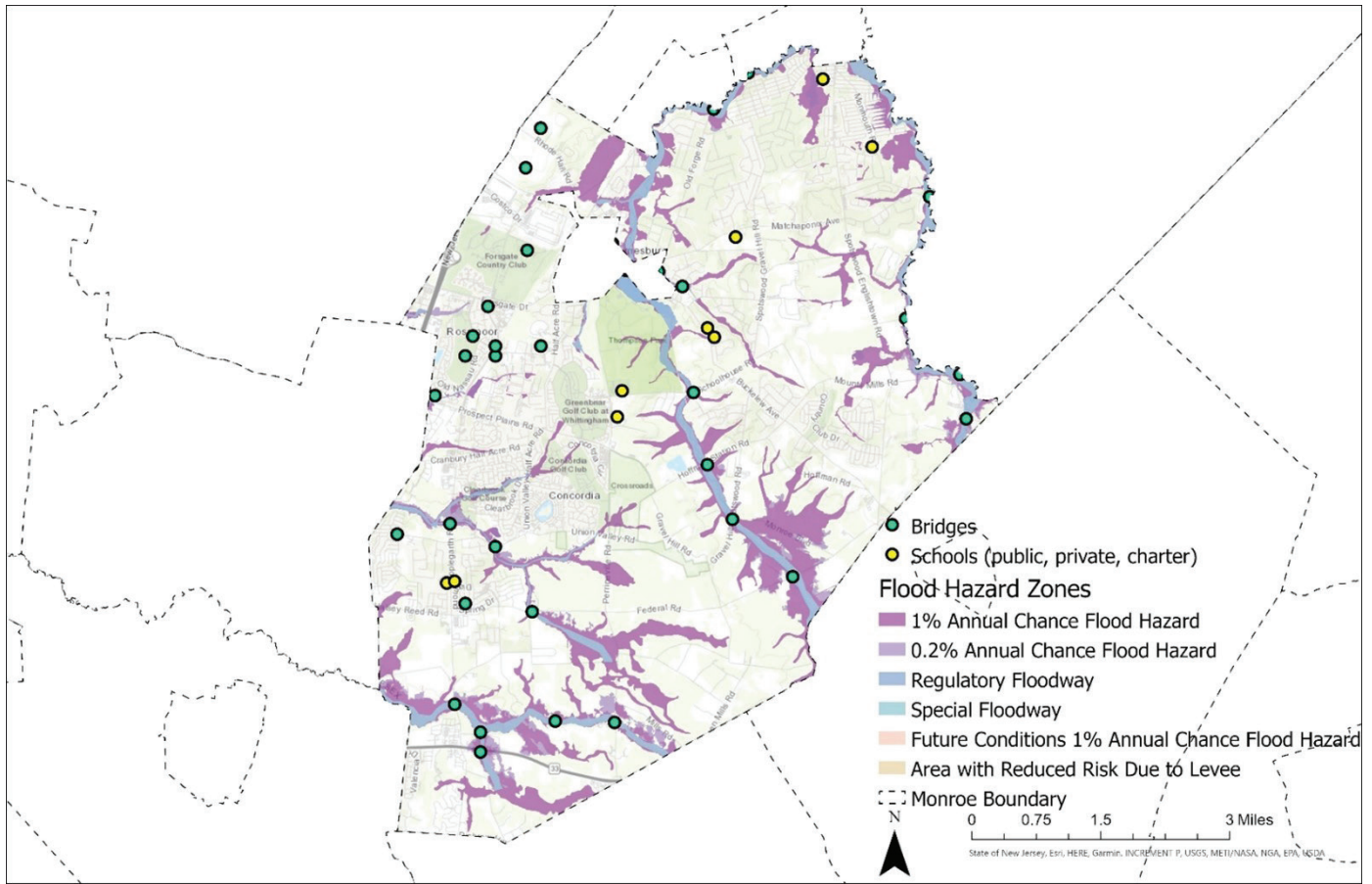
a few inches of inundation at low spots, and those adjacent to culverts and stream channels. The current engineering design standard for the jurisdiction is a 25-year event (i.e. one with a 4% annual chance of occurring), so events more significant than that have the potential to inundate areas.

Monroe has 255 structures located in 100- year (1% annual) and 500-year (0.2% annual) floodplain. Although these figures offer some insight into the flood hazard in this jurisdiction, they are not particularly reliable as a risk indicator because in many cases structures and infrastructure (where the risk-producing impacts occur) are not located in the specific areas that are in the floodplain.

Another potential indicator of the damage that could occur as the result of flooding events is to review the number of FEMA repetitive loss properties and the cumulative amount of money paid out for flood damaged properties. Monroe Township has a relatively small number of repetitive loss properties and damage caused by repetitive flooding. In Monroe, there have been 91 total claims that have resulted in \$3,012,204 of total payments from the National Flood Insurance Program. There are currently six (6) repetitive loss properties in the Township. As of writing, data from the NFIP has not been updated to reflect the total damage done by Tropical Storm Henri that caused significant flood damage to Monroe Township in the summer of 2021. The Township may wish to update its risk assessment and the number of repetitive loss properties once the final data from the damage caused by Henri is released.

Due to Monroe's many streams, brooks, and rivers, flood hazard areas are present throughout the Township. Despite the large extent of these flood areas, impacts are expected to be minimal. This is because much of these areas are open space or undeveloped parcels, and the flood level is expected to be too shallow to cause significant damages.

Hazus is a regional multi-hazard loss estimation model that was developed by FEMA and the National Institute of Building Sciences. Hazus methodology is an established methodology to assess potential risk to existing structures in the scenario of flood events. These floods are projected to occur during extreme weather events that could potentially affect Monroe such as Nor-easters, tropical storms and hurricanes. Based on Hazus model data, it is projected that roughly 26 residential structures would experience moderate damage in a 100-year probabilistic flood event. An additional 28 residential structures would experience



minor damage. In a 500-year probabilistic flood event, about 28 residential structures would experience moderate damage. An additional 30 residential structures would experience minor damage.

Table 2.6 below summarizes the projected losses related to a straight-line event for both the 50-year and 100-year event in Monroe.

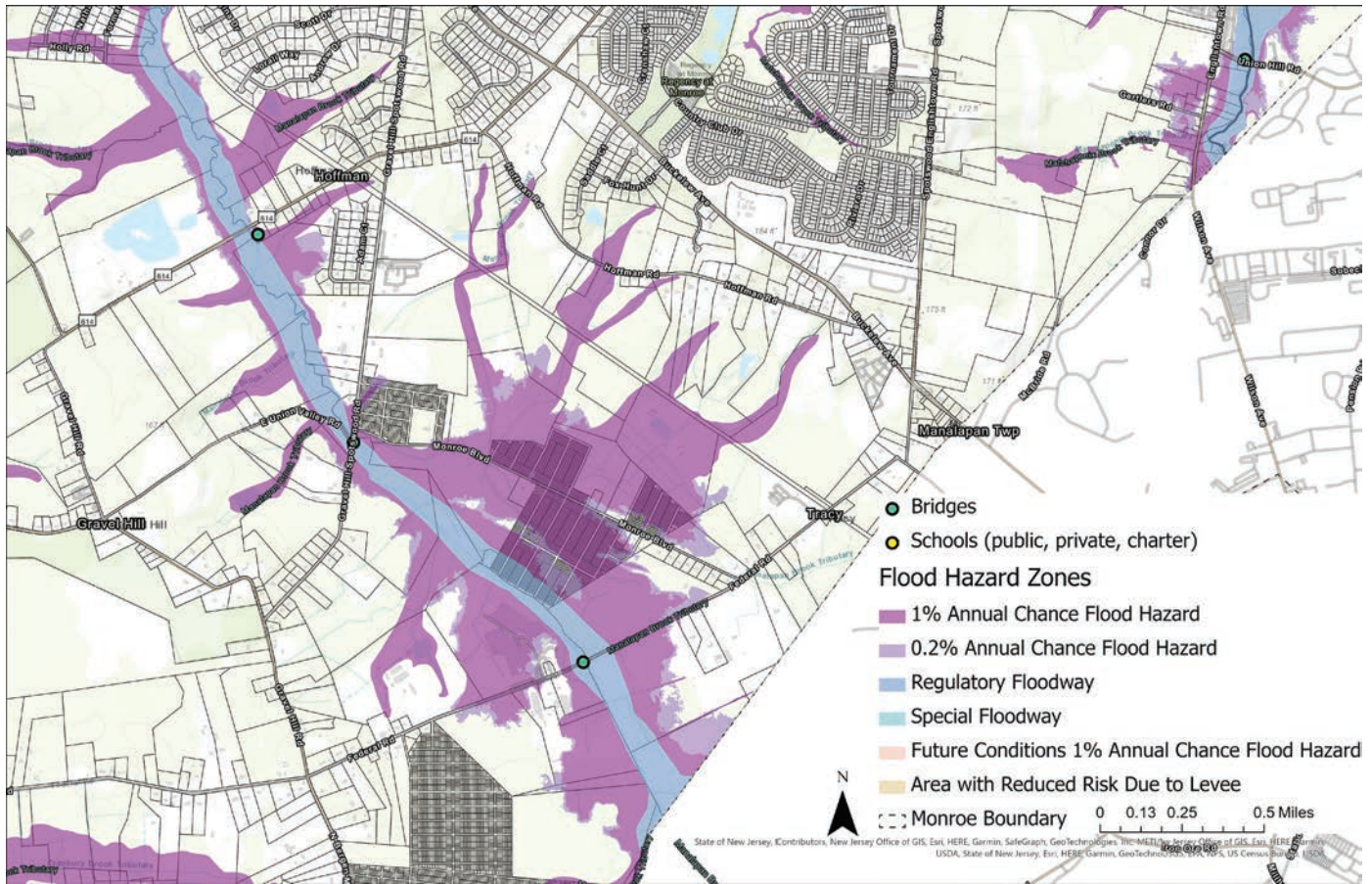
Table 2.6: Flood Damage for Range of Loss Types for 100- and 500-year Flood Events

Occupancy Class	100-year Risk	500-year Risk
Residential	\$9,290,000	\$9,850,000
Commercial	\$2,330,000	\$2,390,000
Industrial	\$430,000	\$450,000
Other	\$1,260,000	\$1,350,000
Total	\$13,320,000	\$14,030,000



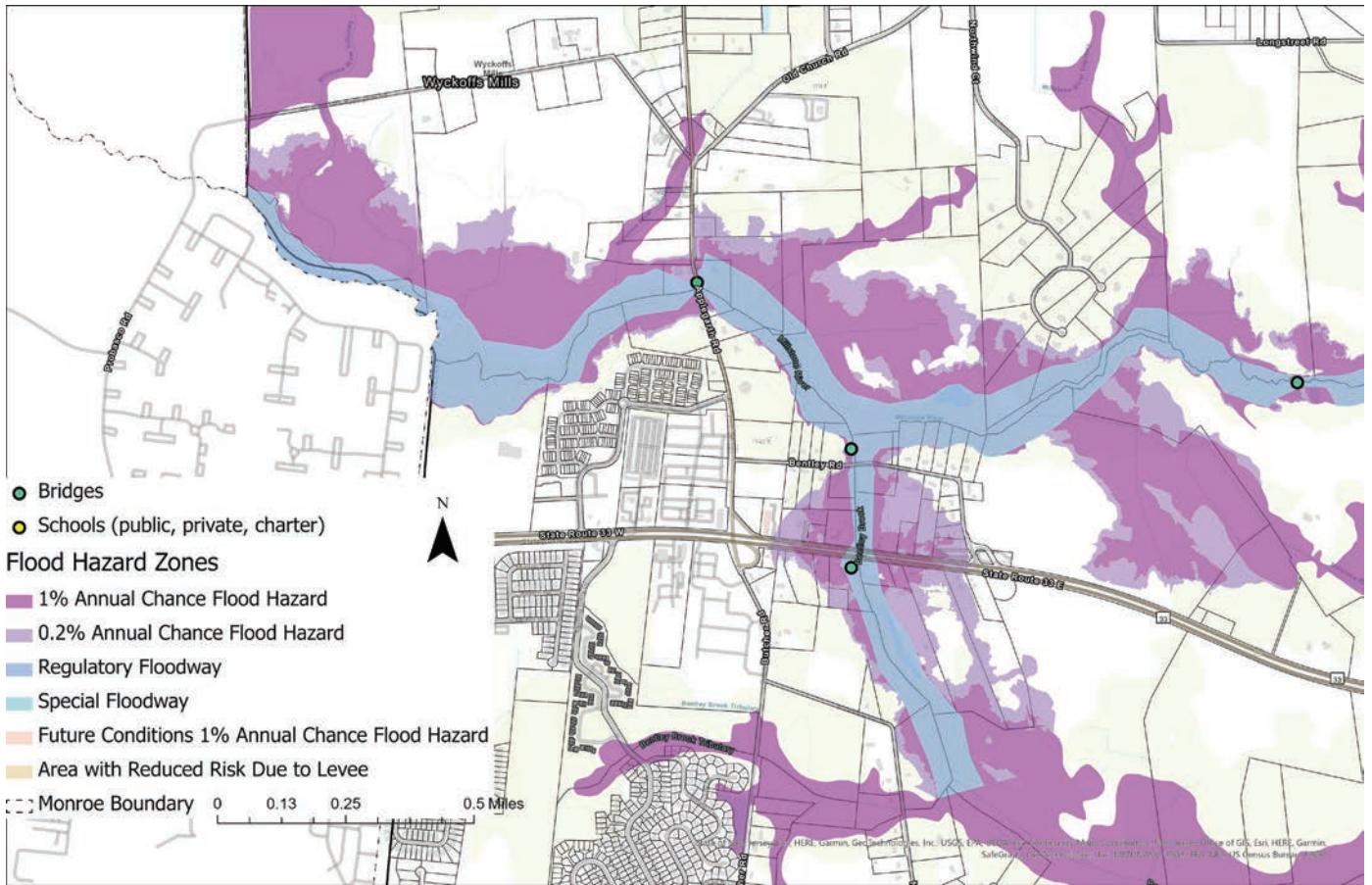
Ashmall Ave Flood Hazard Area

The Ashmall Ave Flood Hazard Area is in the Northeastern portion of Monroe along the Matchaponix Brook. The area does not contain critical infrastructure, but there are many residential properties within the 1% annual chance flood hazard area, which suggests potential for significant losses depending on the severity of the flooding. The Township should ensure that there is sufficient stormwater infrastructure to minimize damage from flooding in this area. If flooding events in this area continue to become more severe, the Township may want to consider buyout programs for repetitive flood properties.



Federal Road and Monroe Flood Hazard Area

The Federal Road and Monroe Flood Hazard Area, located in the southeastern portion of Monroe, covers a larger area compared to the other flood hazard areas. While the boundaries of this flood area are wide, much of the affected lands are open space parcels. There are, however, several commercial developments within the Flood Hazard Area. The source of the flood hazard is the Manalapan Brook, which runs through the area and crosses Federal Road. There is a short bridge on Federal Road which runs over the Manalapan Brook and is within the flood hazard area. This flood hazard area poses a risk of limiting access during a flood event as a long section of the area will be flooded.



Route 33 Flood Hazard Area

The Route 33 Flood Hazard Area in the southern portion of the Township identified in Figure 4 shows a considerable potential impact. A stream connected to the Millstone River runs perpendicular to Route 33 and is the source of this flood hazard. The data indicate that during a flood event, a portion of Route 33 will flood, limiting access in the area. This could potentially impact a small bridge on Route 33 that goes over the stream. Additionally, there are several residential and commercial properties that would be affected in both a 1% and a 0.2% annual chance flooding event.

Build-Out Analysis

A Build-out analysis was performed as a part of the planning process for the Land Use Plan to understand potential impact that new development could impact the Township. Land Use recommendations that would affect future build-out in Monroe are concentrated in the built-out areas of the Township, which is generally outside of any type of floodways. These recommendations were made with Priority 1 of the New Jersey Climate Change Resiliency Strategy report released in 2021. The Township intends to promote future development and redevelopment in areas of Monroe that are safe and away from the flood zones. Additionally, the Township's existing design guidelines encourage the incorporation of solar panels and enhanced stormwater management ensures that future projects will be created with sustainability and resiliency in mind. Any potential impact from severe weather events is likely to be applicable to the Township as a whole as the area where the recommendations are primarily focused on does not have any unique characteristics that make it acutely susceptible to these events. Recommendations made in this Plan pertaining to land use are not intended to exacerbate any of the existing flood hazards in the Township. The results of the Build-out analysis can be found in **Appendix D**.

Based on the Township's affordable housing settlement, most significant residential development activity will occur in areas outside of the flood hazard areas. Potential future zone changes are intended to concentrate development in areas of the Township that are not susceptible to major flooding events. As discussed earlier in this chapter, the Township has also adopted a stormwater ordinance to comply with NJDEP's new stormwater rules. As a result, it is likely that new development that has to comply with these updated stormwater rules could improve stormwater drainage and lessen the chances of localized flooding in Monroe. Recommendations made in this Land Use Plan are also intended to address resiliency in already built out areas of the Township, which have been particularly susceptible to flooding events as evident in the most recent tropical storm season.

Additionally, the Township of Monroe has a Flood Hazard/Conservation District as a part of its land use regulations. This ordinance prevents future development in any delineated flood hazard area based on the boundaries defined by FEMA and/or NJDEP. It also includes requirements to gain NJDEP approval for altering waterways. A separate provision found in the Township's General Provisions and Regulations

provides design standards to developments requiring a floodplain encroachment permit. The design standards are meant to mitigate impacts from flooding by building flood-resistant structures and systems. Ordinance No. 7-85, amended in its entirety by Ordinance No. 0-6-2010-009 of Monroe's municipal code also provides regulations to mitigate potential flood losses which apply to developments in the flood zone.

Evacuation Routes

The New Jersey Office of Emergency Management identifies US Routes 1 and 9, the New Jersey Turnpike, and the Garden State Parkway among other major roadways as the main evacuation routes for Middlesex County (as shown in Figure 2). The New Jersey Turnpike runs through Monroe at the very edge of the Township in the west near Rossmoor. The evacuation routes in Middlesex County focus primarily on the more coastal and low-lying communities in the eastern and northeastern regions of the County such as Woodbridge and Perth Amboy. Monroe and several neighboring communities are less likely to experience flooding and storm-related events outside of the designated flood zones. Local streets within the Township and routes between neighboring towns are unlikely to be directly affected by sea level rise, flooding, and severe storm events.

However, in the unlikely event of a severe storm, it is prudent that local roadways are clearly directed to the designated evacuation routes in Middlesex County. Forsgate Drive, a local road which runs from Jamesburg to the western edge of the Township, is the main access point for the New Jersey Turnpike. This roadway crosses major floodways in the Borough of Jamesburg. Given that the roadway serves as a major east-west transportation route, it is important that the Township work with Jamesburg and Middlesex County to address the persistent flooding issues present in Jamesburg. There are several local roads that lead to evacuation routes US Route 9 and State Route 18, but many of them cross the flood hazard area associated with the Manalapan River, and many also cross the Matchaponix Brook Flood Hazard Area as well. The Township should verify that bridges on roads crossing these floodways can withstand an extreme weather event requiring evacuation out of the Township.

Middlesex County Coastal Evacuation Routes

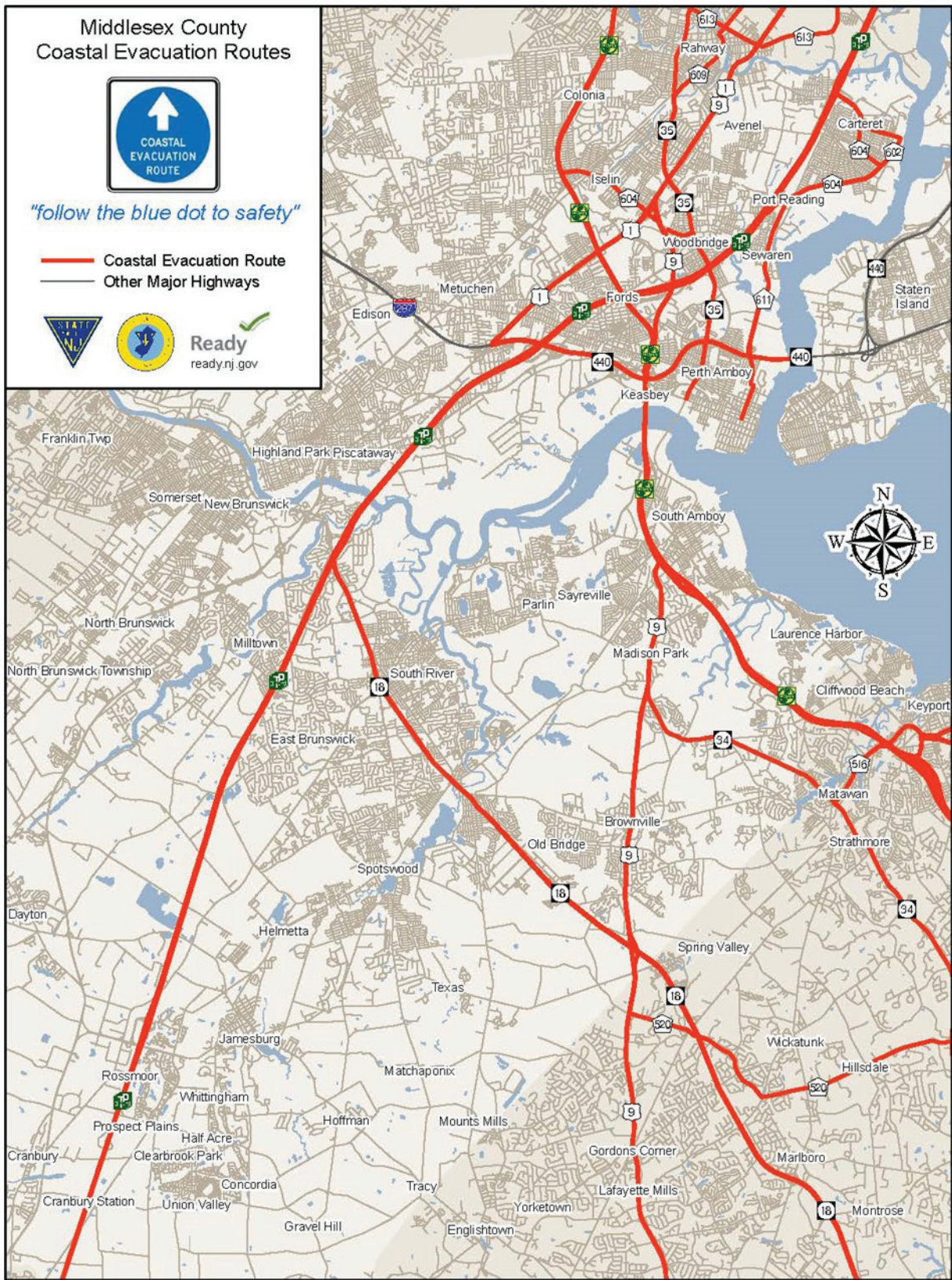


"follow the blue dot to safety"

- Coastal Evacuation Route
- Other Major Highways



Ready
ready.nj.gov



Emergency Facilities

In Monroe, the critical facilities for emergency response include fire stations, a police station, EMS buildings, and the Township's Municipal Building, Recreation Center, and Monroe Township Senior Center, which may provide shelter in emergencies.

Police Facilities

- Police Headquarters at 3 Municipal Plaza

Fire Stations

The Township has three fire districts that are governed by their own publicly elected Board of Fire Commissioners. The fire commissioners govern the fire companies and enact and enforce rules and regulations, establish and maintain operational standards, and is responsible for budgeting and disbursement of fire tax revenues. The districts are composed of both career and volunteer personnel, with Applegarth Volunteer Engine Co. #1 and Monroe Township Volunteer Fire Co. #1 both being 100% volunteer companies.

The Township's fire stations include:

- Monroe Township Volunteer Fire Company #1 at 467 Spotswood Englishtown Road
- Monroe Township Fire Station 23-A at 359 Schoolhouse Road
- Applegarth Volunteer Engine Company #1 at 130 Applegarth Road
- Monroe Township Fire District #2 at 10 Halsey Reed Road
- Monroe Township Fire District #3 at 16 Centre Drive

Emergency Medical Services

- Monroe Township Municipal Ambulance EMS at 2 Municipal Plaza
- Monroe Township First Aid Squad at 47 Monmouth Road

Emergency shelters

- Monroe Township Municipal Building at 1 Municipal Plaza
- Monroe Community Center at 120 Monmouth Road

- Monroe Township Senior Center at 12 Halsey Reed Road

Potential Emergency Shelters

The Homeland Infrastructure Foundation – Level Data (HIFLD) is a subcommittee within the Department of Homeland Security (DHS) that is responsible for collecting geospatial data from all levels of government, processing it for uniformity and quality, and sharing with the end user. According to the emergency shelter data, there are three locations within Monroe that are potential shelters in case of emergency. These are facilities identified by either FEMA or the American Red Cross as places that can potentially house people in case of a disaster or emergency. The three locations are Monroe Township High School, Mill Lake School, and Monroe Community Center.

- Monroe Township High School – 1629 Perrineville Road
- Monroe Community Center – 120 Monmouth Road
- Mill Lake School – 115 Monmouth Road

Gas Stations

Gas service stations are an important resource in case of power outage and during other emergency events. There are eight gas stations located in Monroe with several additional gas stations located across the municipal borders in neighboring Jamesburg, Helmetta, South Brunswick, Englishtown and Old Bridge. The eight gas stations in Monroe are spread throughout the Township; several gas stations are located along Route 33 in the southern region of the Township, some are located in the geographic center area of the Township, and a couple are found in the northern region.

- Shell – 153 Prospect Plains Road
- BP – 1600 Perrineville Road
- Valero 843 NJ-33
- Wawa – Rt 33 and Butcher Road
- Quick Check – 102 Applegarth Road
- Race Way – 992 NJ-33
- Wawa 885 Cranbury South River Road
- Spirit Petroleum 294 Spotswood Englishtown Road

Monroe Critical Facilities

- Center For Ambulatory Surgery-
Monroe - 8 Centre Drive
- Dialysis Clinic Inc Monroe - 2 Research Way
- Monroe Township Dialysis - 298
Applegarth Road
- Princeton Healthcare Occupational
Health - 2 Centre Drive, Suite 400
- Princeton Orthopaedic Associates
- 11 Center Drive
- SPUH Outpatient Wound Care Center
at Monroe - 294 Applegarth Road
- University Radiology Group, PC
- 111 Union Valley Road
- Academy Learning Center -
145 Pergola Avenue
- Monroe Township Middle School
- 1629 Perrineville Road
- Barclay Brook Elementary School
- 358 Buckelew Avenue
- Brookside Elementary School -
370 Buckelew Avenue
- Mill Lake Elementary School -
115 Monmouth Road
- Monroe Township High School -
200 Schoolhouse Road
- Woodland Elementary School
- 42 Harrison Ave
- Oak Tree Elementary School -
226 Applegarth Road
- Applegarth Elementary School -
227 Applegarth Road
- Monroe Community Center - 20
Monmouth Road
- Mill Lake School - 115 Monmouth Road
- Monroe Township Volunteer Fire Company
#1 - 467 Spotswood Englishtown Road
- Monroe Township Fire Station 23-A
- 359 Schoolhouse Road
- Applegarth Volunteer Engine Company
#1 - 130 Applegarth Road
- Monroe Township Fire District #2
- 10 Halsey Reed Road
- Monroe Township Fire District
#3 - 16 Centre Drive
- Police Headquarters - 3 Municipal Plaza
- Monroe Township Municipal Ambulance
EMS - 2 Municipal Plaza
- Monroe Township First Aid Squad
- 47 Monmouth Road
- Monroe Township Municipal Building
- 1 Municipal Plaza
- Monroe Township Senior Center
- 12 Halsey Reed Road

Potential impacts of natural hazards on components and elements of the Master Plan

Monroe Township intends to promote development projects that are located in safe areas, away from the flood zones. The recommendations of the Land Use element tend to focus on encouraging future development in already built out areas of the Township. Additionally, the various elements of the plan make recommendations to deal with resiliency and hazard mitigation to lessen the negative impact on future extreme weather events. Taken together, the recommendations in combination with recently passed Township ordinances such as the new stormwater management ordinance and any future ordinances around solar panels and electric vehicle charging stations are likely to help mitigate any potential impacts of future extreme weather events. Additional recommendations are proposed below to deal directly with efforts to mitigate any potential harm resulting from natural hazards and are consistent with the Middlesex County Hazard Mitigation Plan.

Monroe Township Mitigation Strategy

This section contains the strategies and recommendations that are intended to reduce or avoid risks associated with natural hazards. These recommendations are consistent with and in addition to the mitigation strategies identified by Middlesex County in the 2016 Hazard Mitigation Plan. Refer to **Appendix 12** of the **Middlesex County Hazard Mitigation Plan** for the County's mitigation strategies for the Township.

- Attempt to balance growth with the inclusion of green spaces including of trees and other vegetative cover.
- In the event of extreme future drought, consider a moratorium of watering of lawns and washing of cars among other non-essential uses and setting up of water conservation measures such as rain collection systems are another way of improving the efficient use of water.
- Township should ensure that there is adequate green space and vacant area where snowfall during a winter storm can be deposited from Township roadways by the Township's DPW.
- Maintain adequate roadway and sidewalk widths to have enough area for snowplows to be able to deposit snow from the main driving area of the roadway in the event of a winter storm.

- Adhere to the most up-to-date building codes to ensure the highest quality of construction.
- Maintain an active tree inventory that includes an assessment of tree conditions and a prioritization list for trees that should be remove given their potential to cause damage to utilities and structures in a high wind event.
- Where feasible, the Township should move existing above ground utilities underground to make them less susceptible to outages in high wind events.
- Ensure that all critical facilities have backup generators
- Work with Middlesex County and NJDOT to ensure that the bridges that crosses specified floodways will withstand an extreme weather event that requires evacuation out of Monroe.

A policy statement regarding consistency, coordination, and integration of the Vulnerability Assessment with various existing or proposed plans

Monroe Township participated in Middlesex County's 2016 Hazard Mitigation Plan. It is the Township's intention to continue to prepare for future hazards in a manner consistent with the 2016 HMP. The Township's Master Plan is intended to be consistent with and effectuate the Middlesex County 2016 HMP.

Land Use Plan Recommendations

Directions

“Check off” a completed Recommendation and mark the year of completion as a way to measure progress.

Short: complete in 1-2 years; **Medium:** complete in 3-5 years; **Long:** complete in 10+ years.

Land Use Plan Recommendations

<i>Recommendation</i>	<i>Implementing Party</i>	<i>Timeframe</i>	<i>Completed</i>	<i>Year Completed</i>
General				
1 Work with the school district to plan for additional school facilities and potential sites to accommodate the same.	Planning Board, Township Administrator, Township Council, Board of Education	Short to Medium		
2 Explore acquisition of open space parcels to create a regional park in the southwestern part of the Township.	Open Space Committee, Township Administrator	Medium		
3 Review zone boundaries to minimize the number of split zoned lots.	Planning Board, Township Council	Short to Medium		
4 Begin planning process for adaptive reuse of the New Jersey Training School property that preserves the majority of the site as open space.	Township Administrator, Township Council	Long		
5 Create a new Open Space zone to cover all types of open space parcels in the Township.	Planning Board, Township Council	Short to Medium		
Residential				
6 Ensure that off-street parking requirements for residential uses comply with RSIS standards.	Planning Board, Township Council	Short		
7 Evaluate the potential to rezone the R30 zone on N Disbrow Hill Road to the R3A zone.	Planning Board, Township Council	Medium		
8 Evaluate the potential to rezone the R60 zone on Spotswood-Englishtown Road to the R3A zone.	Planning Board, Township Council	Medium		
9 Evaluate the potential to rezone portions of the NC zone on Lower Matchaponix Road to the R30 zone to reflect the underlying residential land uses.	Planning Board, Township Council	Short to Medium		
10 Extend regulations regarding fences on corner lots to the PD-AH and PRD-AH zones.	Planning Board, Township Council	Short		
Commercial				
11 Develop clear definitions for “Sidewalk Cafes” and “Outdoor Dining”.	Planning Board, Township Council	Short		
12 Permit Outdoor Dining as an accessory use in commercial zones that currently permit eating and drinking establishments.	Planning Board, Township Council	Short		
13 Develop definition for “Commercial Recreation”.	Planning Board, Township Council	Short		
14 Create definition for “active ground floor use” and “active use”.	Planning Board, Township Council	Short		

Land Use Plan Recommendations

	<i>Recommendation</i>	<i>Implementing Party</i>	<i>Timeframe</i>	<i>Completed</i>	<i>Year Completed</i>
15	Develop definitions and regulations for various light industrial uses including “fulfillment warehouse/center”, “warehousing”, “distribution”, “self-storage”, and “flex space”.	Planning Board, Township Council	Short		
16	Develop definitions and regulations for “brewpub”, “distillery” and “microbrewery”.	Planning Board, Township Council	Short		
17	Review and adjust off-street parking requirements to align with modern parking standards.	Planning Board, Township Council	Short to Medium		
18	Evaluate the potential for mixed-use development along the Spotswood-Englishtown Road corridor, or where feasible, conduct an Area in Need of Redevelopment Study.	Planning Board, Township Council	Short to Medium		
19	Explore potential to utilize redevelopment designations for underutilized office spaces.	Planning Board, Township Council	Medium to Long		
20	Explore changes to the MU-HD-R-AH zone to allow for more commercial and/or light industrial uses.	Planning Board, Township Council	Medium		
21	Explore the potential to permit a hotel use in the PRGC zone.	Planning Board, Township Council	Medium		

Vulnerability Assessment

22	Adopt the Electric Vehicle Charging Station model ordinance and alter the “Reasonable Standards” provision that comply with the Township’s existing bulk standards.	Township Council, Planning Board	Short		
23	The Township should preemptively consider certain mitigating water conservation efforts to prepare for a potential future scenario of excessive heat and exceptional drought.	Township Council, Township Administrator	Ongoing		
24	Ensure that there is adequate green space and vacant area where snowfall during a winter storm can be cleared off the roadways.	Township Administrator, Public Works	Ongoing		
25	Adhere to the most up-to-date building codes to ensure the highest quality of construction.	Construction official, Planning Board	Ongoing		
26	Have an active tree inventory that includes an assessment of tree conditions and a prioritization list for trees that should be removed given their potential to cause damage to utilities and structures in a high wind event.	Shade Tree Commission, Environmental Commission	Short to Medium		
27	Ensure Township has backup generators for all critical facilities.	Township Administrator	Short		
28	Consider implementing a buyout program for repetitive flood properties.	Township Administrator, Township Council	Long		
29	Evaluate opportunities along with regional partners to minimize damage from flooding along Cedar Brook caused by future extreme weather events.	Township Administrator, Public Works, Utility Department, Middlesex County	Medium to Long		

Land Use Plan Recommendations

<i>Recommendation</i>	<i>Implementing Party</i>	<i>Timeframe</i>	<i>Completed</i>	<i>Year Completed</i>
30 Evaluate opportunities along with regional partners to minimize damage from flooding along the Manalapan Brook caused by future extreme weather events.	Township Administrator, Public Works, Utility Department, Middlesex County	Medium to Long		
31 Evaluate opportunities along with regional partners to minimize damage from flooding along the Wigwam Brook and other waterways caused by future extreme weather events.	Township Administrator, Public Works, Utility Department, Middlesex County	Medium to Long		
32 Work with Middlesex County and neighboring municipalities to create a regional commission on flood control and mitigation.	Township Administrator, Township Council, Middlesex County	Medium to Long		
33 Communicate with NJDOT to ensure that the Route 33 bridge over the Millstone River will allow safe passage in an evacuation situation.	Township Administrator, NJDOT	Ongoing		

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CIRCULATION PLAN



Circulation Element Goals & Objectives

1. Adopt a Complete Streets Policy – State and County roadways are already covered by Complete Streets policies.

- a. Prepare streetscape standards for various categories of streets and roads for improving pedestrian, bicycle and vehicular safety and enhancing visual qualities.

2. Develop a multimodal transportation system that meets the transportation and recreational needs of residents.

- a. Prepare a comprehensive bicycle and pedestrian system, including bicycle lanes and walkways and their design standards for the entire municipality.
- b. Create shared-use nature paths through the wetland areas paralleling Applegarth Road and Perrineville Road, from Union Valley Road to Route 33.
- c. Create on-road and/or grade separated bicycle facilities to connect schools, the park and ride, retail areas, senior and community centers and open space – existing and proposed.
- d. Develop safe multimodal routes across Route 33 to connect the southern part of the Township.
- e. Evaluate the opportunity to utilize power line right of way for a trail.

- f. Identify connection opportunities between residential developments.

3. Ensure a safe and efficient transportation system for Monroe residents and employers.

- a. Assess the traffic operations on Forsgate Drive, from the NJ Turnpike interchange to Railroad Avenue/Buckelew Avenue, including the intersection of Buckelew Avenue and CR 612/Pergola Avenue/Matchaponix Avenue.
- b. Address the traffic operations on and around Applegarth Road.
- c. Assess future traffic operations around the new housing developments.
- d. Identify corridors for traffic calming/speed reduction improvements.



Existing Conditions

The Township of Monroe's roadway network is composed of a hierarchy of roads (State, County and local) serving both local and regional travel, private automobiles, and freight/commercial traffic. In summary, these roadway typologies and competing needs demonstrate the issues and concerns faced by the Township. The Circulation Element of this plan will document the existing conditions and develop recommendations and future actions to improve transportation circulation and safety in Monroe.

Roadway Network

This section describes the various types of streets within the network and how they function from both a traffic circulation and roadway safety perspective.

Functional Classification

Federal Highway Administration (FHWA) categorizes roads by functional classification which helps to define the type of traffic the roads were intended to carry. Generally, the different functional classes also fall under different jurisdictions. Interstates, both U.S. and State routes, are under the jurisdiction of the New Jersey Department of Transportation while County roads, both 500 and 600 series, fall under the jurisdiction of Middlesex County. Local roadways fall under the municipal jurisdiction. This complicates matters as sections of roadways may fall under multiple jurisdictions (i.e. sections of Forsgate Drive is SR 32 while others are CR 612) and a number of roadways identified as areas in need of improvement are not under Monroe Township's jurisdiction.

Municipalities can advocate for changes to the functional class of a roadway if travel patterns and/or a community's needs justify the change. The functional classification of roadways in Monroe is shown in the Functional Classification Map on the following page with the major categories described below.

Interstate

Interstates, are the highest classification of Arterials and are designed and constructed with mobility and long-distance travel in mind. The NJ Turnpike, also known as I-95, is a limited access toll road which runs along the western limits of Monroe and falls into this functional class. Monroe is located between Interchange 8, connecting with State Route 33 and Interchange 8A, connecting with Forsgate Drive State Route 32/ via Cranbury South River Road (County Route 535).

Principal Arterials

These roadways serve major centers of metropolitan areas, provide a high degree of mobility, and can also provide mobility through rural areas. Forsgate Drive, Cranbury South River Road, and SR 33 are examples of this classification. U.S. 130, located to the west of and paralleling the NJ Turnpike, is not within the Monroe borders but provides north-south accessibility and mobility. Similarly, U.S. 9 provides north-south accessibility and mobility to the east of the Township.

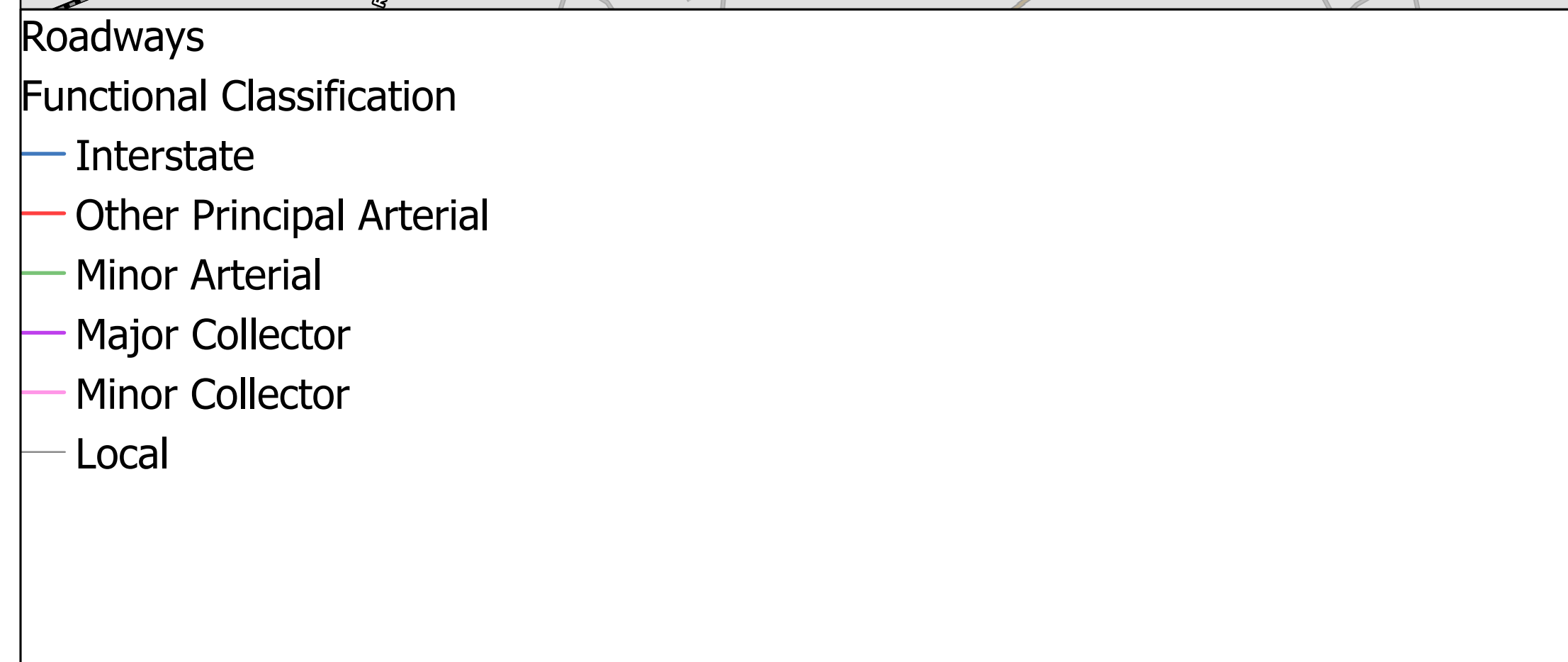
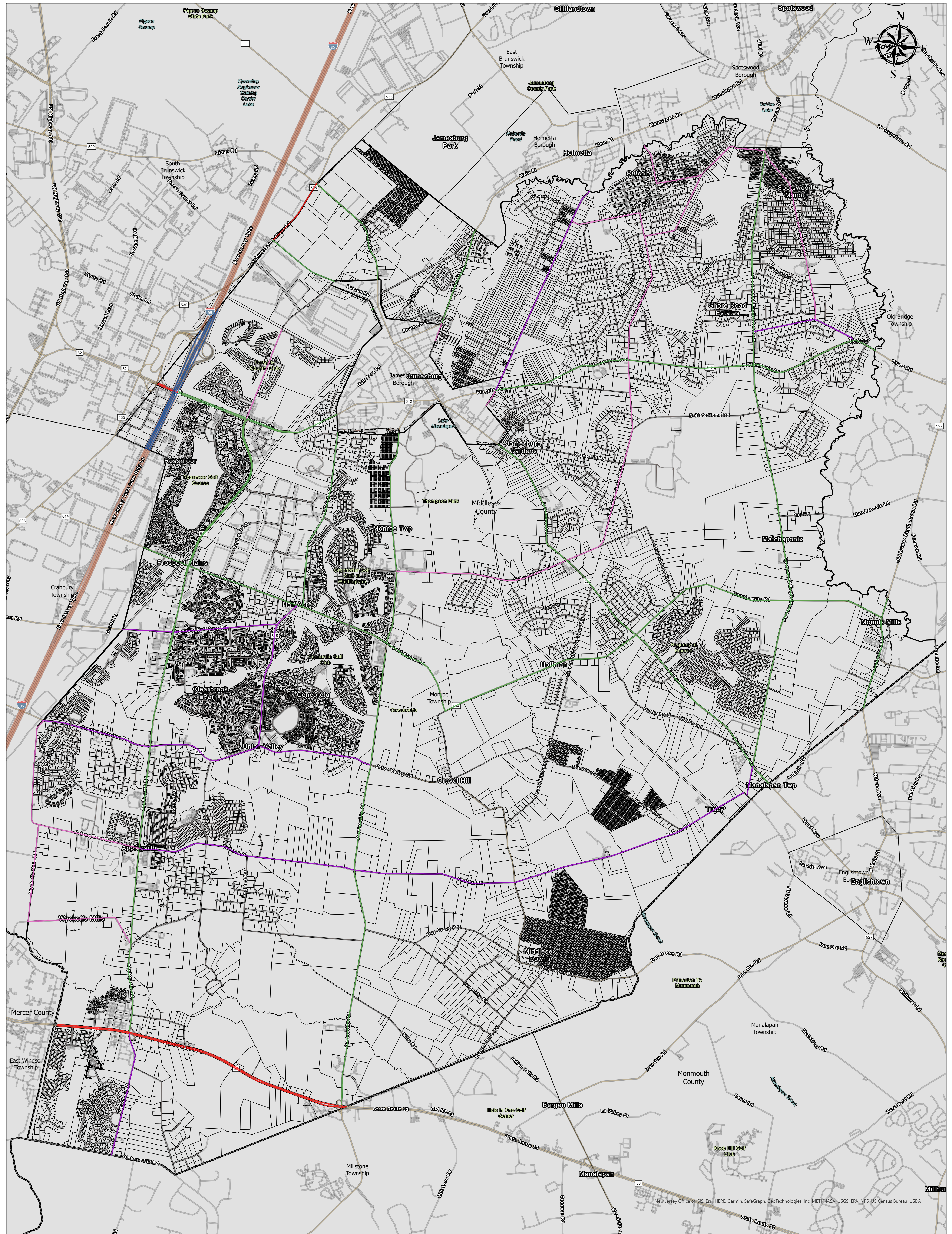
Minor Arterials

Minor arterials connect to and enhance Principal Arterial Roads to provide moderate length trips at a lower level of mobility than the principal arterials. Matchaponix Road, Mount Mills Road, Perrineville Road and Applegarth Road are within this classification.

Major/Minor Collectors

Collectors serve a critical role in the roadway network by gathering traffic from Local Roads and funneling them to the Arterial network. The distinctions between Major Collectors and Minor Collectors are often subtle. Generally, Major Collector routes are longer in length; have lower connecting driveway densities; have higher speed limits; are spaced at greater intervals; have higher annual average traffic volumes; and may have more travel lanes than their Minor Collector counterparts. Federal Road, Old Forge Road, and a segment of Texas Road are classified as Major Collectors. Schoolhouse Road, Monmouth Road, Halsey Reed Road, Wyckoff Mills Road, Spotswood Gravel Hill Road, and a segment of Applegarth Road fall under Minor Collectors.

Within the Collector Classification, the density of the area is considered and sub-classified as Urban and Rural Collectors. Of the roadways classified as collectors, Federal Road is classified as a Rural Major Collector. Wyckoffs Mills-Applegarth Road and Wyckoffs Mills Road are classified as Rural Minor Collectors. All others are classified as Urban Major and Minor Collectors.



Monroe Township Functional Classification Map

H

2

M

0 0.75 1.5 3 Miles

New Jersey Office of GIS, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc., MET/NASA, USGS, EPA, NPS, US Census Bureau, USDA

Local Streets

The remaining roads in Monroe are considered local streets and serve to provide direct access to adjacent lands and the other road classifications.

Street Characteristics

The physical characteristics of the various roadways can influence circulation, safety, and travel mode choice, as well as inform recommendations for improvements. The following section provides a high-level overview of existing speed limits, roadway widths, and traffic control devices for roadways in Monroe.

Posted Speed Limits

The majority of roadways in Monroe have a 25-mile per hour speed limit. Exceptions include State and County routes that provide for regional travel between the Township and neighboring communities, which have posted speed limits between 40 and 55 mph. These include Forsgate Drive, SR 33, Applegarth Road (CR 619), Prospect Plains Road (CR 614), Perrineville Road (CR 625), Buckelew Avenue (CR 522), and Cranbury South River Road (CR 535).

Roadway Widths

Roadway widths, typically measured from curb to curb, or in some cases edge of pavement to edge of pavement where curbs are not provided, play a crucial role in circulation planning. In developed communities such as Monroe, roadway widths are often constrained by existing land uses, Right-of-Way, environmentally sensitive areas, and utilities. Overall community objectives and modal prioritization must be considered when allocating space to improve traffic operations,

circulation, and mode choice. Roadway widths vary widely based on the roadway and even sections of the roadway. Applegarth Road, for instance, is a two-lane road with narrow shoulders in the southern portion of the Township, and a four-lane road with a center grass median near Forsgate Drive. Other roads, such as Federal Road less than 24' wide, leaving little room for shoulders, bike lanes or sidewalks.

Table 3.1: Roadway Design Standards

Classification	Right-of-Way Width	Paved Width*	Number of Lanes
Major Arterial	New Jersey State Highway		
Minor Arterial	70 feet	48 feet	2-4
Major Collector	60 feet	40 feet	2
Minor Collector	54 feet	34 feet	2
Rural Collector	50 feet	30 feet	2
*Including shoulders			

Traffic Control Devices

Many of the intersections on County roads have been recently upgraded with new and MUTCD compliant traffic control device for vehicles and pedestrians. The new intersections have also been upgraded to include ADA elements, including curb ramps with contrasting color, detectable warning surfaces. A review of intersection and pedestrian facilities at key locations show some improvements are still needed.



Traffic Circulation

Traffic congestion, freight and non-freight related, and safety were recurring themes expressed by stakeholders and residents as part of the outreach for this Master Plan update. A number of corridors and intersections have been specifically cited as dangerous, congested and/or in need of improvements. The input received by the community are supported by the empirical data obtained.

Roadway Safety

The primary purpose of the roadway network is to convey people and goods safely and safety has been identified as a critical concern to Township residents. The project team reviewed town-wide crash data obtained from the Monroe Township Police Department and from the NJDOT Safety Voyager Crash Database. A total of 2,132 crashes occurred in Monroe between 2017-2019, which was the most recent set of years with a complete dataset available. Although crashes occur throughout the Township, there are a high number of crashes at a few specific intersections and corridors.

High Crash Corridors

- The Applegarth Road corridor, from Forsgate Drive to Route 33, accounted for 461 (or 21.6%) of the total crashes in Monroe.



- The Perrineville Road corridor, from Forsgate Drive to Route 33, accounted for 281 (or 13.2%) of the total crashes in Monroe.
- NJ 33, within the Township borders, accounted for 186 (or 8.7%) of the total crashes, while Route 32/CR 612/Forsgate Drive/Matchaponix Avenue, accounted for 180 (8.4%) of the total crashes. Combined these four corridors account for over 50% of the crashes in the Township.

- Prospect Plains Road (158 crashes or 7.4%), Spotswood Englishtown Road (135 crashes or 6.3%), Buckelew Avenue (132 crashes or 6.2%) and Schoolhouse Road (106 crashes or 5.0%) combined also accounts for 25% of the total crashes in the Township.



Of these top corridors, Schoolhouse Road is the only one under municipal jurisdiction.

High Crash Intersections

Another method of conducting a crash analysis is to identify crash hotspot locations, and in this case, specifically at intersections. Unsurprisingly, a majority of these hot spots are located on the high crash corridors.

- Applegarth intersections with Forsgate Drive, Prospect Plains Road, Cranbury Half Acre Road, Union Valley Road, and Route 33 account for five of the high crash intersections
- Prospect Plains Road intersections with Half Acre Road and Perrineville Road experiences a high number of crashes.
- Spotswood Englishtown Road at Matchaponix Avenue and at Mounts Mills Road were identified as high crash intersections.
- Possum Hollow Road at Costco Drive also has a history of high crashes.



Other Safety Concerns

The proliferation of freight traffic, due to the numerous warehousing and distribution facilities in and around Monroe, the location between two NJ Turnpike interchanges, and relatively narrow county roadways, has caused a safety concern for many residents. Both Applegarth Road and Prospect Plains Road were identified as two roadways which had significant truck traffic.

Excessive speed was also identified as a concern through most of the Township. Jurgelsky Road, has been cited a roadway consistently used as a high-speed cut-through from NJ 33 to Perrineville Road for commuters despite frequent targeted enforcement efforts.



The intersection of Applegarth Road and Old Church Road/Wyckoffs Mills Applegarth Road has been cited as an ongoing concern. The two approaches to Applegarth Road are significantly skewed creating sight distance issues and thus safety concerns along with operational issues because of the small traffic island.

The intersection of Mounts Mills Road and Old Bridge-Englishtown Road combines poor sight distances with high travel speeds to create unsafe conditions. Many residents indicated this intersection as needing improvements.

Traffic Operations

Freight traffic has also been cited as the cause for traffic congestion and operational issues throughout the Township roadway network, particularly on Applegarth Road, Forsgate Drive, and Prospect Plains Road.



Cranbury South River Road, particularly in the area between Costco Drive and Docks Corner Road, experiences significant freight traffic due to the heavy warehousing and distribution uses. In addition to the freight traffic in this area, new developments are under construction which will add to the demands on the roadway network. The Venue at Monroe is poised to add over 450 new residential units, and a new religious and cultural facility is likely to attract new vehicle trips to the area.

Large scale housing developments are under construction or planned for other areas of the Township. The Monroe Parke development, located on Mounts Mills Road at Spotswood Englishtown Road will bring more than 200 residential units, a bank, pharmacy, and a small grocery store to this area. The Garden Falls Stone Museum is another property in the immediate area that could be prime for redevelopment.

The intersection of Spotswood Englishtown Road and Monmouth Road experiences delays, particularly during the PM peak periods due to a lack of traffic control and a number of roadway intersections and commercial driveways.



Bicycle & Pedestrian Accommodations

Municipalities with robust bicycle and pedestrian facilities, towns that are more bikeable and walkable, are highly desirable. There are many benefits to providing multimodal infrastructure, some of which are:

- Promotes a healthier lifestyle and desirable place to live, work and play
- Provides residents additional travel choices, reducing the number of vehicles on the road and carbon footprints
- Improves and sustains economic development by promoting tourism, becoming a destination for visitors
- Improve transportation equity

Bicycle Accommodations

While some trails exist, mainly in Thompson Park and James Monroe Memorial Park, on-road bicycle infrastructure is limited in Monroe. Some roads are wide enough to accommodate cyclists on shoulders, other roadways are too narrow, have high volumes of truck traffic or have a high posted speed limit to provide bicycle facilities. Many residents voiced the need for dedicated bicycle infrastructure and would support widening roadways to provide bike lanes and sidewalk or shared-use side path.



Pedestrian Accommodations

In the planned residential developments, the sidewalk network is complete. However, there are many sidewalk gaps along the majority of the State and County maintained roadways. One main municipally maintained roadway without sidewalks is Schoolhouse Road, hampering students from being able to walk to school.

A number of residents expressed the need to establish safe bicycle and pedestrian infrastructure that could connect residential neighborhoods to each other and providing non-vehicular transportation options to shopping, restaurants, municipal facilities and the park and ride. Others expressed the desire for off-road nature walks and more opportunities for passive recreation.

Public Transit

Monroe Township is served by four NJ TRANSIT route and Suburban Transit bus routes. NJ TRANSIT Routes 138 and 139 go to the Port Authority Bus Terminal in NYC, while the M1 (New Brunswick, Jamesburg, 8A Shuttle) and M2 (Brunswick Square Mall Monroe Jamesburg Shuttle) routes travel to areas in Middlesex County. Suburban Transit operates routes into NYC from the park and ride on Applegarth Road.



Monroe Township Medical Transportation provides on-demand transportation services for residents 55+ or disabled and are registered with the Senior Center, for routine medical appointments.

Residents commented that an expanded shuttle or circulator service in town would be a benefit and allow access to shopping, restaurants, the library and municipal complex. A shuttle to the nearest NJ TRANSIT station was also desired.

Recommendations

1. Improve access and safety of active transportation modes

Coupled with sidewalk requirements for site redevelopment and development projects, a Complete Streets Policy requires that future roadway improvement projects provide safe accommodations for all roadway users, of all ages and all abilities. NJDOT and Middlesex County have adopted Complete Streets Policies in 2009 and 2012, respectively. Adopting a policy would cover all roadways within the Township.

Traffic engineering priorities have been shifting, a greater focus has been on bicycle and pedestrian infrastructure and safety. Municipalities throughout the State and the country have been re-establishing the balance between providing optimal movement of vehicles and safe travel and operation for all roadway users. A Complete Streets Policy is a statement that bicycle, pedestrian, and ADA compliant infrastructure is a priority for the Township.

2. Develop off-road, shared-use paths

One of the key features of Monroe is the natural resources that give the Township a quiet and rural feel while still being close to desired amenities. There is a desire for additional passive recreation that would allow residents to explore and enjoy the preserved natural spaces. The area paralleling Applegarth Road and Perrineville Road, from Union Valley Road to Route 33 would provide an opportunity to develop a nature walk through an environmentally sensitive area. Pervious pavement technologies, which allow stormwater to pass through the surface, are advancing and being tested. An approved porous pavement material can help to overcome the environmental hurdles of passive



recreation trails through sensitive areas. This can be further improved upon through the implementation of elevated walkways, which can reduce environmental impacts by limiting disturbance during construction and use.

Other opportunities to develop off-road trails exist in the Township. Power line alignments can be evaluated for partnerships to develop shared-use paths. The power line rights-of-way join down towards Englishtown and head north along the eastern municipal border and to the northwest towards Jamesburg. These paths would serve as recreational facilities but can also serve as infrastructure for non-vehicular vehicle commuting and shopping trips. Recommendations for additional bicycle and pedestrian infrastructure can be found in the Roadway Network Improvement Plan for Monroe. With the proliferation of e-scooters and e-bikes, the length of trips via non-vehicular means has increased significantly. Providing non-vehicular infrastructure can also help to reduce the demand on the existing roadway network.

A number of residents expressed the need to establish safe bicycle and pedestrian infrastructure that could connect residential neighborhoods to each other and providing non-vehicular transportation options to shopping, restaurants, municipal facilities and the park and ride. More frequent and expanded service, and better lighting to enhance safety at the park and ride were identified as improvements that would encourage more people to use transit.

The Township should review the recommendations included in the Monroe Township Trail Network Development Plan, written in 2009, when assessing potential improvement locations. Locations should connect neighborhoods, schools, the Park and Ride, shopping and municipal facilities, like the library and the Municipal offices.

3. Develop On-Road bicycle facilities

Developing additional non-vehicular transportation and recreation options can help to reduce traffic congestion and promote healthier communities and provide economic benefits – both in terms of retail and tourism sales and more affordable transportation options. There are a number of opportunities to create bike facilities, including bike lanes sections of Perrineville Road, Half Acre Road and Union Valley Road.



Developing bicycle and pedestrian infrastructure in some areas, however, would take additional study and planning. Federal Road was repeatedly identified as a candidate for bicycle and pedestrian facilities though there are significant obstacles to overcome.

4. Improve Traffic Circulation and Operations

Traffic congestion has been cited as a primary concern throughout the Township. Addressing these concerns is not only difficult because of the volumes, constrained right-of-way and mix of vehicle types dictated by the various land uses but also because the roadways are under multiple jurisdictions. As the majority of the congestion and safety concerns are not on municipally maintained roadways, coordination will be required with the appropriate roadway operators.

- a. Conduct a traffic study to assess traffic operations on SR 32/CR 612/Forsgate Drive, from CR 535/S. River Road to Railroad Avenue/Buckelew Avenue. In addition to NJDOT, Middlesex County and Monroe Township, the New Jersey Turnpike Authority should be considered prime stakeholders for this study. Heavy truck traffic contributes to operational and safety concerns.



- b. Conduct a traffic study to assess traffic operations on SR 33 from SR 133 to Perrineville Road/Prodelin Way. Similar to Forsgate Drive, this would require multi-agency coordination. A focus of this study should also be to develop recommendations for safe multimodal facilities across Route 33 and ingress/egress to the neighborhoods with access on Route 33. Providing these connections can help to bridge the gap

between the southern area of the Township and the rest of Monroe. Understanding the current conditions and developing recommendations to mitigate existing and future traffic is particularly important given the ongoing development and redevelopment of the area.



- c. Conduct a traffic study to assess traffic operations at the intersection of CR 613/ Spotswood Englishtown Road and Monmouth Road. This intersection is the confluence of a number of other streets (Erickson Avenue, Taylor Avenue, Cooper Avenue Harrigan Avenue and Park Avenue), bus stops and two well-patronized establishments. The offset intersections and skewed approach of Monmouth Road and Stop controlled and caused significant congestion, particularly during the PM peak period.



- d. Conduct a Township-wide traffic study to

evaluate the impacts of all the redevelopment projects together. Traffic Impact Studies generally assess the impacts a development project may have on the immediately adjacent area but may not identify impacts to the surrounding areas. Each development is also evaluated against the existing conditions and may not incorporate traffic patterns developed by others. Monroe is undergoing significant residential and industrial development. Understanding the impacts of a full build out condition can assist in planning for future growth. Specific areas identified as concerns are:

- Mounts Mills and Spotswood Englishtown Road: New medium-density residential developments are ongoing in this area, with a number of additional parcels available for future development.
- Prospect Plains Road (CR 614) and Union Valley Half Acre/Half Acre Road (CR 614): A new house of worship has been approved for this location. Vehicles traveling on Union Valley Half Acre/Half Acre Road are required to negotiate this offset intersection. Vehicle storage for left-turning vehicles is very limited and creates operational concerns.



5. Reduce Vehicular, Bicycle, and Pedestrian Crashes

From 2017 through 2019, there were a total of 2,132 reported crashes in Monroe. This included fifteen bicycle/pedestrian crashes, four of which resulted in a fatality. Roadway safety was a common concern expressed by Township residents. A safety analysis is recommended along Monroe's major corridors,

including Applegarth Road, Perrineville Road, Buckelew Avenue, Federal Road, Spotswood Road, Gravel Hill Road, Matchaponix/ Texas Road and Mount Mills Road. A detailed crash analysis can help to identify over-represented crash types and the types of improvements to mitigate those crashes.

Recommendations for safety improvements should reference FHWA's Proven Safety Countermeasures as doing so may open grant funding opportunities through the Highway Safety Improvement Program. Improvements can be quickly implementable and low-cost, like traffic signal timing modifications to incorporate Leading Pedestrian Intervals or increases Yellow Change Intervals. Other low-cost improvements include installing traffic signal backplates with reflective borders, wider edge line striping and shoulder and center line rumble strips. Providing high-visibility pedestrian crossings, traffic calming techniques and adopting appropriate speed limits to accommodate all road users are other additional ways to promote safety in Monroe. Creating a more comfortable bicycle and pedestrian environment through traffic calming and speed management would be an important feature in developing a more walkable corridor like the retail district proposed on Spotswood Englishtown Road/CR 613.

Specific areas identified as safety concerns are:

- Prospect Plains Road at Applegarth Road and at Union Valley Half Acre Road intersections were cited as safety and operations concerns. Many residents indicated the need for leading left turn phases at the signals.
- Applegarth Road, from Prospect Plains Road to Cranbury Station Road/Union Valley Road has a number of intersections with safety concerns. A Road Safety Audit to identify opportunities to improve safety for this corridor may be warranted.
- Mounts Mills Road and Old Bridge-Englishtown Road: The skewed intersection, poor sight distance and vehicle travel speed on Old Bridge-Englishtown Road create unsafe conditions. A traffic signal in this location is currently in the design phase.
- Applegarth Road and Old Church Road/Wyckoff Mills Applegarth Road: The two approaches to Applegarth Road are significantly skewed creating sight distance concerns and operational concerns because of the small traffic island.

Improvements have been considered in the past though improvements have not been made. Efforts to improve sight distance and better define the traffic operations should be evaluated.

narrow and not well suited for heavy truck traffic. Aside from the warehousing spaces, much of the surrounding land uses are residential, commercial and retail.

Through the North Jersey Transportation Planning Authority, Middlesex County is preparing a freight movement study through the southern portion of the County, focusing on Monroe, Cranbury and South Brunswick, with secondary areas including the rest of Middlesex County and Mercer and Monmouth Counties. Monroe should be an active participant as a stakeholder and work towards implementing the results from the study.



- Jurgelsky Road, From Dey Grove Road to Bergen Mills Road: Due to the wide roadway, this residential street is used as part of a high speed cut through from NJ 33 to Perrineville Road. As a known concern, traffic enforcement is performed in this area. Traffic calming measures such as mini-roundabouts or chicanes or curb extensions could be used to reduce speeds.

6. Improve the safe movement of freight traffic



As a result of the New Jersey Turnpike widening, large warehouse, distribution and fulfillment centers have been constructed in and in the neighboring municipalities surrounding Monroe. Being situated between Interchange 8A and Interchange 8, trucks utilized those warehouses using the State, County and Municipal roads that serve and pass-through Monroe. Many of the roadways that travel through Monroe are

Circulation Plan Element Recommendations

Directions

“Check off” a completed Recommendation and mark the year of completion as a way to measure progress.

Circulation Plan Recommendations

<i>Recommendation</i>	<i>Implementing Party</i>	<i>Timeframe</i>	<i>Completed</i>	<i>Year Completed</i>
General				
1 Adopt a Complete Streets Policy or Ordinance.	Township Administrator, Township Council	Short		
Off-Road and Shared-Use Paths				
2 Develop a shared-use path paralleling Applegarth Road and Perrineville Road, from Union Valley Road to Route 33.	Environmental Commission, Planning, Parks	Medium to Long		
3 Develop shared-use paths utilizing existing power line rights-of-way.	Planning, Municipal Utilities Department	Medium to Long		
4 Review and update the 2009 Monroe Township Trail Network Development Plan.	Planning	Short		
On-Road Bicycle Facilities				
5 Develop a Bicycle Network Master Plan.	Planning	Short		
6 Install bicycle facilities on Half Acre Road, Union Valley Road, Perrineville Road in sections where feasible.	Planning, Engineering, Public Works, Middlesex County	Short to Medium		
7 Develop bicycle infrastructure on Federal Road and other connector roads.	Planning, Engineering, Public Works	Medium to Long		
Traffic Circulation and Operations				
8 Conduct a traffic study to assess traffic operations on SR 32/CR 612/Forsgate Drive, from CR 535/S. River Road to Railroad Avenue/Buckelew Avenue.	Engineering, Planning, Middlesex County	Short to Medium		
9 Conduct a traffic study to assess traffic operations on SR 33 from SR 133 to Perrineville Road/Prodelin Way. Similar to Forsgate Drive.	Engineering, Planning	Short to Medium		
10 Conduct a traffic study to assess traffic operations at the intersection of CR 613/ Spotswood Englishtown Road and Monmouth Road.	Engineering, Planning	Short to Medium		
11 Conduct a Township-wide traffic study/circulation plan to evaluate the cumulative impacts of all the redevelopment projects.	Engineering, Planning	Short to Medium		
12 Conduct an operations review at Mounts Mills Road and Spotswood Englishtown Road.	Engineering, Planning	Short		
13 Conduct a safety and operations review at Prospect Plains Road (CR 614) and Union Valley Half Acre/ Half Acre Road (CR 614). This could be done in conjunction with Recommendation #15.	Engineering, Planning	Short		

Circulation Plan Recommendations

<i>Recommendation</i>	<i>Implementing Party</i>	<i>Timeframe</i>	<i>Completed</i>	<i>Year Completed</i>
Safety				
14 Implement low-cost systemic safety improvements such as Leading Pedestrian Intervals, increased Yellow Change intervals, traffic signal backplates, and center line and shoulder rumble strips.	Engineering, Public Works	Short to Medium		
15 Conduct a safety assessment on Applegarth Road, from Prospect Plains Road to Cranbury Station Road/Union Valley Road.	Engineering, Planning, Traffic Safety, Middlesex County	Short to Medium		
16 Conduct a safety and operations review at Mounts Mills Road and Old Bridge-Englishtown Road.	Engineering, Planning, Traffic Safety	Short		
17 Conduct a safety and operations review at Applegarth Road and Old Church Road/Wyckoffs Mills Applegarth Road.	Engineering, Planning, Traffic Safety	Short		
18 Evaluate traffic calming measures on Jurgelsky Road.	Engineering, Planning	Short		
Freight				
19 Assign resources to actively participate in the Southern Middlesex County Freight Movement Study.	Township Administrator	Short		

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OPEN SPACE PLAN



Introduction

Parks, recreation, and open space are critical to communities as they not only improve the quality of life for residents by creating diverse amenity-rich environments, but they also improve water quality, guard against flooding, and maintain scenic views. Quality parks and facilities attract visitors, residents, and businesses to town, thereby promoting economic activity and overall fiscal health. Monroe Township's unique location in the southeastern part of Middlesex County and its historic rural character makes the preservation of green space critical. Providing for parks and recreation and preserving open space is therefore not only essential to the Township's local quality of life but also to regional environmental benefits.

The experience with the COVID-19 pandemic has highlighted the critical role that ample open space for passive recreation plays for residents to be able to maintain both their physical and mental well-being. Quality open space and the connections to access them will be of significant importance as the Township continues to experience residential development and population growth that results from that development.

Having parks, recreation facilities, and open space is certainly beneficial to the community as a whole, but knowing the types that exist is equally important. Monroe Township has a diverse array of open spaces that have varying purposes and serve the residents of Monroe in vastly different ways. Understanding the kinds of parks and open spaces can help the Township realize its recreational and conservational identity and recognize current inventory gaps. Identifying these gaps will allow for the Township to plan for future changes, be it open space acquisition, trail expansion, and more to ensure that Monroe will maintain its high quality of life into the future. This Open Space Plan attempts to identify where Monroe is currently, what are its gaps and plot a way forward to address the Township's goals and fill in its existing gaps.

The Municipal Land Use Law (N.J.S.A. 40:55D-5) defines open space as: "Any parcel or area of land or water essentially unimproved and set aside, dedicated, designated or reserved for public or private use or enjoyment or for the use and enjoyment of owners and occupants of land adjoining or neighboring such open space, provided that such areas may be improved with only those buildings, structures, streets, and off-street parking and other improvements that are designed to be incidental to the natural openness of the land."

Goals & Objectives

- 1. Continue the trend in open space acquisition, environmentally sensitive area preservation, and farmland preservation through various planning techniques with the goal of retaining 50% of the Township as preserved lands.**
 - a. Utilize and State or County funding resources as to achieve the overall preservation goal.
 - b. Encourage clustered residential development in order to preserve woodlands and enhance overall development.
 - c. Protect wildlife and biodiversity as a part of preservation efforts.
- 2. Encourage a network of pedestrian greenways along stream corridors and bicycle paths which link residential neighborhoods with open space, community facilities and commercial areas.**
 - a. Create pedestrian and bicycle pathways throughout the municipality to achieve a complete network.
 - b. Utilize Complete Streets policies to promote multi-modal mobility.
 - c. Encourage new residential development to create walking and biking connections to surrounding uses.
- 3. Ensure quality and accessible recreational opportunities for residents of all ages.**
 - a. Create additional recreational opportunities for residents in the southern part of the Township.

- b. Make age-appropriate improvements to Township owned parks based on the needs of nearby residents.
- c. Maintain adequate levels of recreational opportunities for current and future population needs.
- d. Create non-vehicular connections between parks and residential areas.

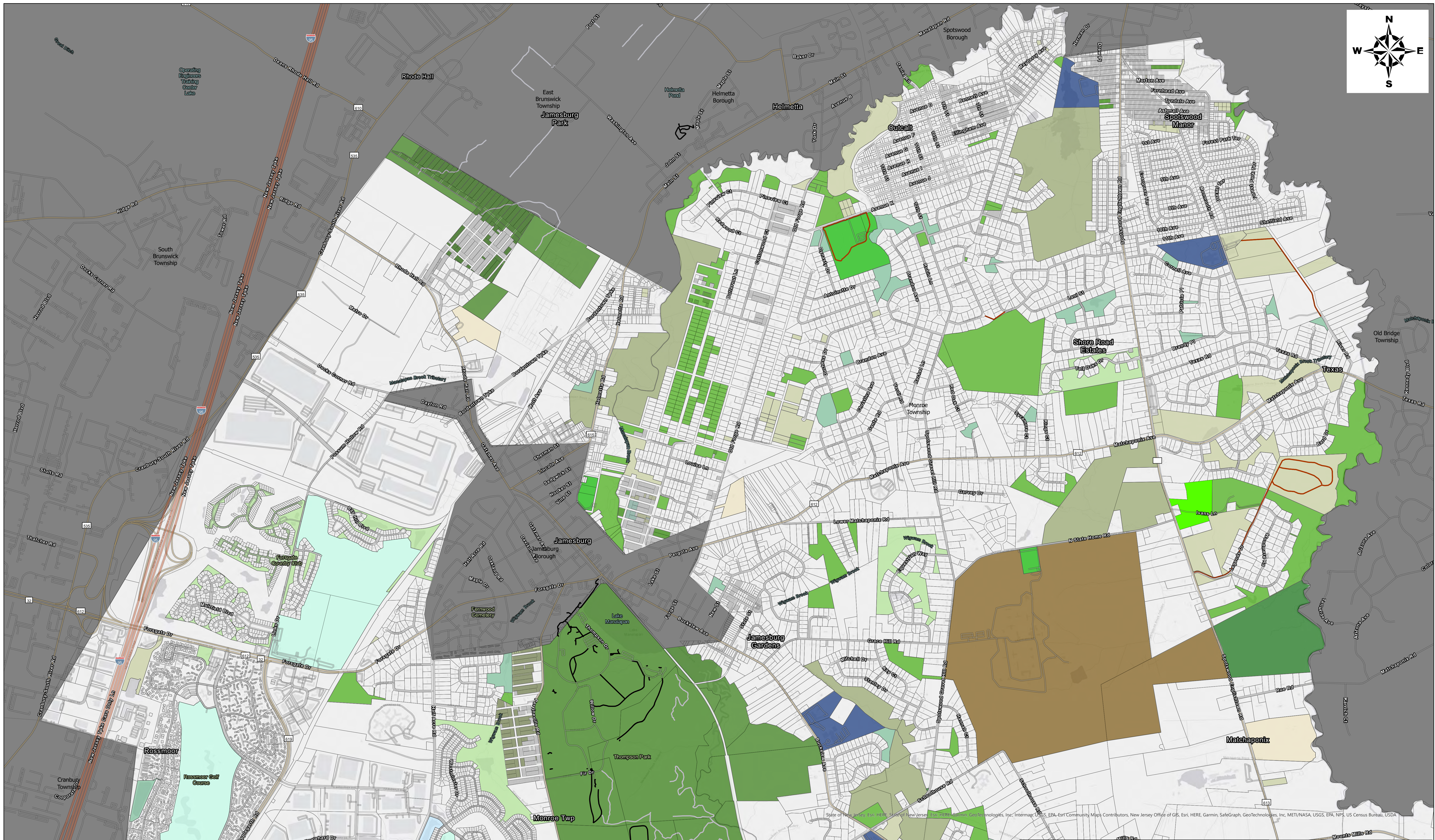
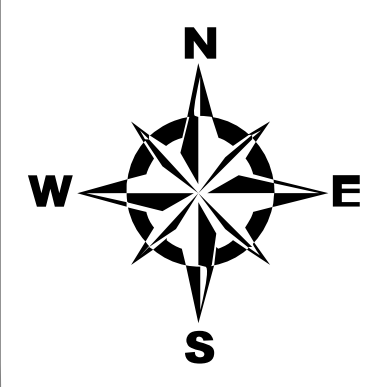
4. Preserve and enhance rural character of certain areas of the Township, particularly the PA-4 Rural Planning Area in accordance with the State Plan.

- a. Protect unique agricultural resources by preserving prime agricultural lands through the Farmland Preservation Program and through the transfer of development rights.
- b. Consider sites with historical features to become opportunities for education, placemaking, and preserving rural and historic character.

Conditions Analysis

The Open Space Maps show the Township's established parks and other publicly accessible open space and recreational facilities (i.e. school fields). Collectively, these resources provide a wide array of amenities from kayaking and horse riding to court and field games. 57% of survey respondents said that they go to a park in Monroe at least two times per month, with 37% reporting that they go once a week or more often. While residents are frequent patrons of the many parks in Monroe, they would like to see even more recreational spaces in their Township. This is particularly true for the southern area of the Township as new residential developments have increased the population significantly without an equivalent expansion of recreational facilities for this area. The gaps analysis highlights in greater detail the need for the expansion of recreational and open space opportunities in this area of the Township. In addition to the expansion of open space, it is incumbent upon the Township to work with its partners at Middlesex County to ensure that both County and Township parks maintain a high standard of excellence as this is a priority for Monroe residents.

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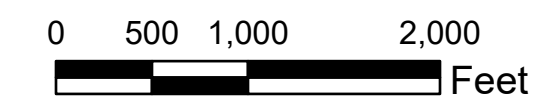


State of New Jersey, Esri, HERE, DeLorme, Swire, SwireHema, AeroGraphic, Intermap, Inc., SwireHema, Esri, HERE, Garmin, SafeGraph, GeoTechnology, Inc., MET/NASA, USGS, EPA, NPS, US Census Bureau, USDA

PROJECT #	TMNR2101
DATE	July 2022
DESIGNED BY	RPC
DRAWN BY	PFC
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REVIEWED BY	

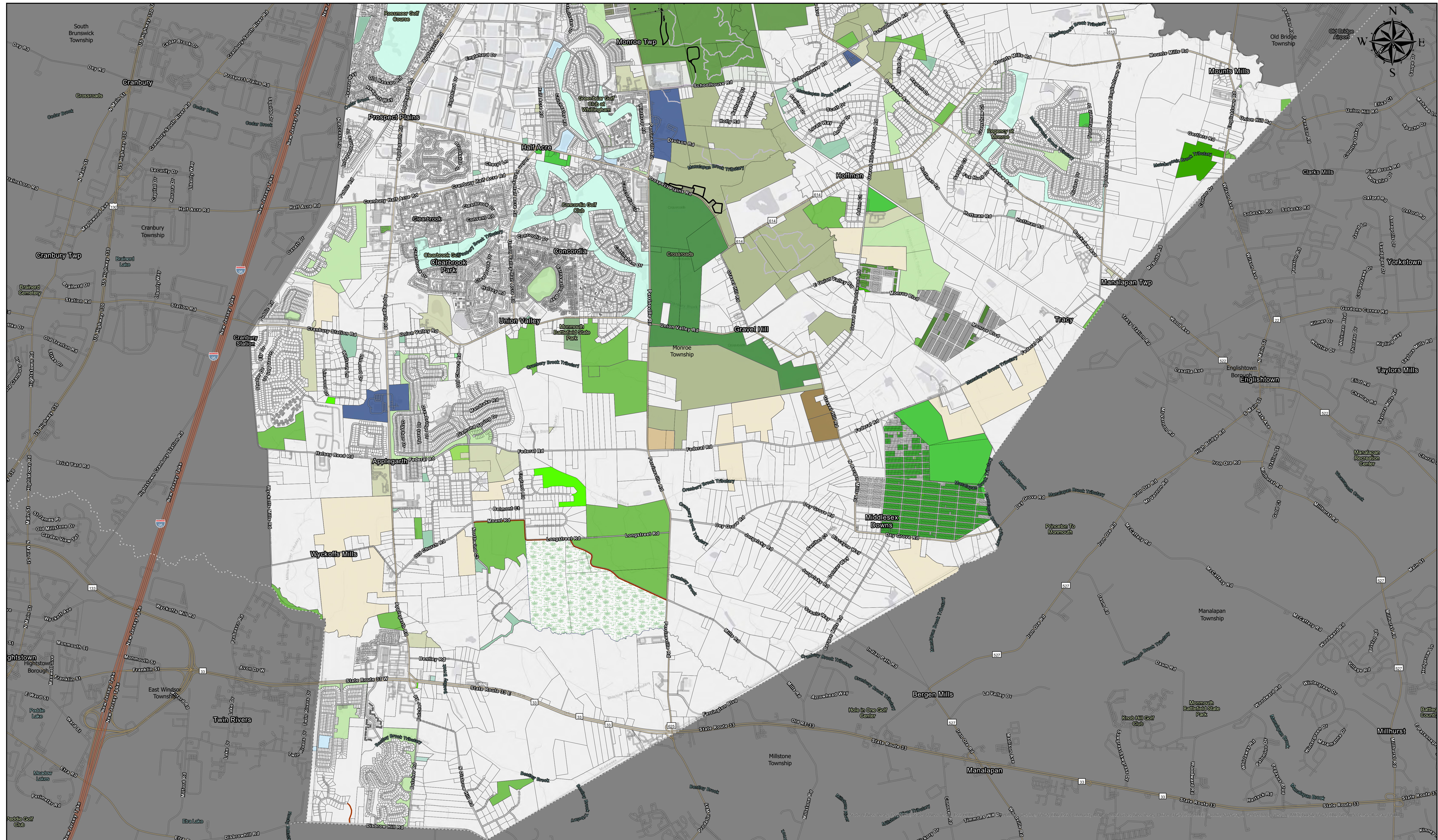
County Hiking Trails	County Parks & Recreation	Other	State Farmland Preservation
County Walking Paths	Municipal Farmland Preserved	Private Golf Course	State Open Space
Township Trails/Paths	Municipal Open Space	Private Farmland Preservation	State Parks & Recreation
Open Space Type	Municipal Parks & Recreation	Private Open Space	Wetlands Mitigation Bank
County Open Space	Municipal Stormwater Basin	Private Stormwater Basin	Municipal Properties
Municipal Use	School		

OPEN SPACE NORTH MAP



**119 Cherry Hill Road,
Suite 110,
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P: 862.207.5900
F: 973.334.0507**

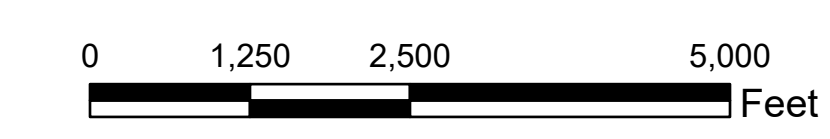
Melville, NY 11747
Albany, NY 12205
New York, NY 10001
White Plains, NY 10604
New City, NY 10956
Parsippany, NJ 07054
Howell, NJ 07731



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County Hiking Trails	County Parks & Recreation	Other	State Farmland Preservation
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OPEN SPACE SOUTH MAP



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As the maps on the previous pages show, open space in Monroe Township constitutes various different types of open space from protected wetlands and farmlands to parks that provide basketball courts and ball fields. **Chart 4.1** highlights these various types of open space in Monroe Township. Definitions for each type of open space present in Monroe are as follows:

- **County Open Space:** a parcel of land that is space preserved under the Division of Conservation and Open Space Stewardship within Middlesex County's Office of Parks and Recreation from development and generally does not include any type of improvement. Middlesex County does allow for farmers agreements on certain open space parcels. County Open Space parcels are often environmentally sensitive and are unlikely any type of trail system. An example of County Open Space in Monroe is Matchaponix Forest.
- **County Parks & Recreation:** a parcel of land that is space that is developed to provide for active and/or passive recreation that is owned and maintained by Middlesex County's Office of Parks and Recreation. County Parks and Recreation parcels can also be utilized to preserve environmentally sensitive areas, but generally are more developed and publicly accessible compared to County Open Space parcels. An example of County Parks and Recreation in Monroe is Thompson Park.
- **Municipal Farmland:** a farmland parcel that is preserved through Monroe Township's Farmland Preservation program established by Ordinance No. 3-2008-005. Preserved farmland parcels are deed restricted to preserve the land for farming use. Municipal farmland parcels remain under the ownership of the farmer and continue to be active farmland. An example of Municipal Farmland in Monroe is Federal Farm Market on the corner of Federal and Perrineville Roads.
- **Municipal Open Space:** a parcel of land that is space preserved by Monroe Township. Parcels that are Municipal Open Space are preserved from any future development and generally do not include any type of improvement. An example of municipal open space are the large tracts of land along the western side of Perrineville Road just north of Route 33.
- **Municipal Parks and Recreation:** a parcel of land that is developed to provide for active and/or passive recreation that is owned and maintained by Monroe Township's Department of Recreation and Parks. Municipal Parks and Recreation parcels can also be utilized to preserve environmentally sensitive areas, but generally are more developed and publicly accessible compared to Township Open Space parcels. An example of Municipal Parks and Recreation in Monroe is Veteran's Park.
- **Municipal Stormwater Basin:** a parcel of land that is developed with an above ground detention basin that is owned and maintained by the Township in order to prevent stormwater runoff. An example of a Municipal Stormwater Basin is the Antoinette Drive Stormwater Basin.
- **Municipal Use:** a parcel of land that is owned and maintained by Monroe Township. These tracts of land are generally developed for some type of municipal uses, either civic, recreational, utility, etc. An example of a municipal use is the Monroe Community Center.
- **Municipal Properties:** a parcel of land that is owned and maintained by the Township according to property tax records but is not officially listed within the Township's Open Space. These parcels include a variety of different uses including stormwater basins, conservation easements and other types of land uses.
- **Other:** a parcel of land that is owned and maintained by the Township that can include a variety of land uses that do not fit within the definition of any other open space category. An example of other is the Utility Department's pump station on Route 33.
- **Private Golf Course:** a parcel of land that is developed into a golf course and is owned and maintained by either the private golf club or the residential association that the golf course is developed within. Golf courses that are developed as a part of an active adult community generally are required as a part of the Township's zoning code. An example of a private golf course is the private golf course within the Rossmoor community.
- **Private Farmland Preservation:** a parcel of land that is owned by a private farmer participating in the farmland preservation program. Despite ownership of the property remaining with the private farmer, the farmer has sold the development rights to preserve

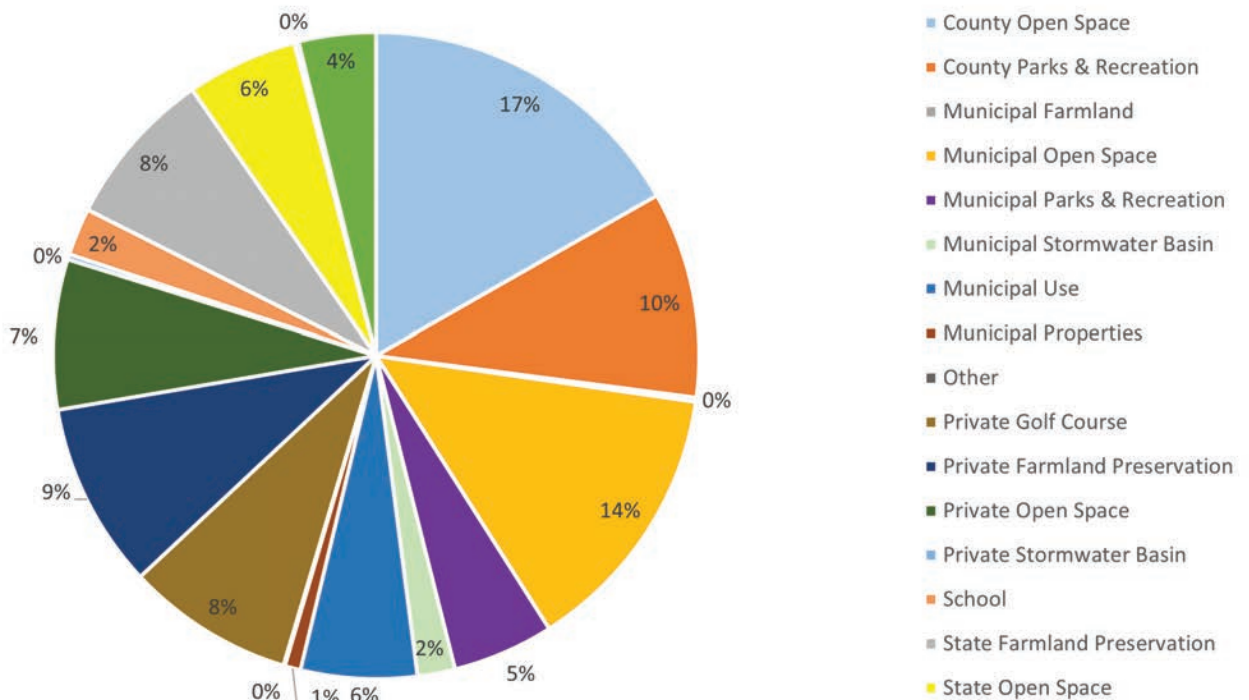
the land for agricultural use. An example of private farmland preservation is the large farm on Wyckoff Mills and Applegarth Road.

- Private Open Space: a parcel of land that is undeveloped and maintained by a private entity, generally a homeowner’s association. Private Open Space is the result of Monroe’s zoning ordinance that requires cluster development that permanently preserves a certain percentage of acreage within a new development. An example of Private Open Space is the preserved land around the Monroe Manor residential community.
- Private Stormwater Basin: a parcel of land that is developed with an above ground detention basin that is owned and maintained by a homeowner’s association in order to prevent stormwater runoff. An example of a Private Stormwater Basin is the Valencia Drive Stormwater Basin.
- School: a parcel of land that is owned and maintained by the Monroe Township Board of Education. These tracts of land are developed with some time of educational facility. Often, the tracts have some type of playground, ball field or other type of recreational facility that may be open to the public outside of school hours.

- State Farmland Preservation: a parcel of farmland that is preserved under the State Farmland Preservation Program that is administered by the State Agricultural Development Committee. Preserved farmland parcels are deed restricted to preserve the land for agricultural use. State farmland parcels remain under the ownership of the farmer and continue to be active farmland.
- State Open Space: a parcel of land that is space preserved by the New Jersey DEP. Parcels that are State Open Space are preserved from any future development and generally do not include any type of improvement. An example of state open space is the large tract of land along the eastern side of Spotswood-Englishtown Road across from the New Jersey Training School property.

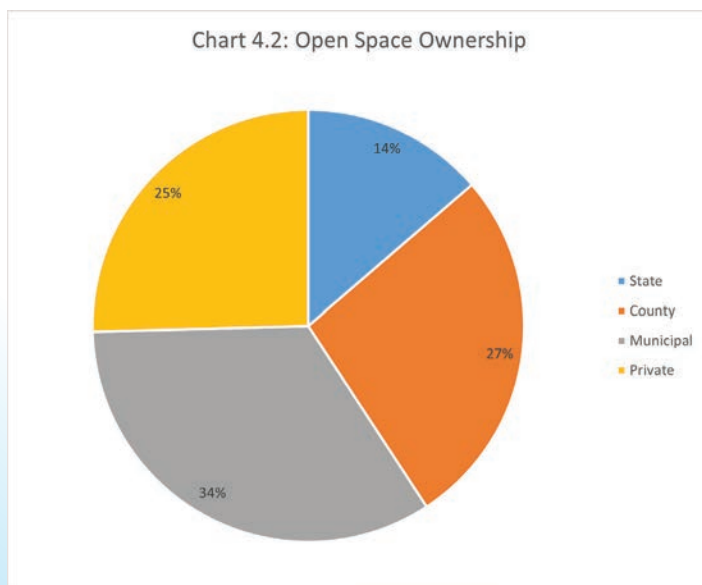
It should be noted that even within the different categories of open space there is a wide variety of the types of facilities provided at each specific tract of open space within Monroe. Parks and recreation tracts provide the widest variety of facilities to residents such as walking trails, ball fields, picnic tables and parking areas. Further analysis of the types of facilities at each of the parks in Monroe are detailed in **Table 4.1**. Analysis of the different types of open space results in different types of ways that residents can utilize the

Chart 4.1: Monroe Open Space Breakdown



spaces and the accessibility to them. As an example, a private golf course that is controlled by a private club or is part of an active-adult community is unlikely to be accessible to the general public unless an individual has a membership. Meanwhile, playgrounds or running tracks around school buildings are accessible to the public but only during specific hours when school is not in session. Given these differences, analysis of open space for recreational purposes only consider the parks and recreation category regardless of ownership.

There is also a great diversity of ownership among these types of open space between state, county and municipal entities as well as private ownership. Monroe Township is the largest owner of open space in the municipality, owning about one-third of all open space (34%). Middlesex County is the second largest entity in charge of open space in the Township with 27% of all open space. Roughly one-quarter of all open space is controlled by private ownership, which can range from anything from a Homeowners Association to a private farmer. New Jersey owns about 14% of all open space in Monroe Township. These ownership statistics help to allow the Township to understand the entities that are needed when discussing open space expansions and improvements. Partnerships between the Township and other open space entities are critical to ensure that any improvements or expansions are done in a strategic manner that most efficiently improves the recreational opportunities for residents.



Recreational Level of Service

In addition to the need for the preservation of the natural environment and farmland, Monroe’s open space is intended to provide recreational opportunities to residents. The Open Space Plan intends to provide the Township with an assessment on how current recreational facilities meet the needs of Township residents. The latest national guidelines published by the National Recreation and Park Association (NRPA) encourages each community to create its own custom standards to determine whether it is providing adequate open space to its residents. Below is an initial list and subsequent analysis of common land-use related metrics to determine the open space needs for Monroe:

- 1. Acres per capita** – to determine if community has enough parkland
- 2. Facilities per capita** – To determine if a community has enough recreation facilities such as athletic fields, playgrounds, tennis courts, swimming pools, etc.
- 3. Building square footage per capita** – To determine if a community has enough indoor recreation space such as recreation centers, community centers, senior center, or gymnasiums
- 4. Access distance/time (bike, pedestrian, car, transit)** – To determine if parkland and facilities are easily accessible to residents via preferred modes of transportation including driving, transit, bicycling, or walking
- 5. Quality of facilities and experience** – To determine if park facilities and geographies are consistent¹

Several metrics regarding costs and revenues are not listed above but could be considered by the Monroe Parks & Recreation Department. They include operating expenditures per acre managed, operating expenditures per capita, revenue per capita, and revenue as percentage of operating costs.

A secondary analysis of metrics #1-3 can also determine if parkland is equitably distributed based on population and geography and can be a strong consideration on any future decision by the Township to expand and improve upon its existing inventory. Open space opportunities and future potential acquisitions are discussed under “Future Open Space” on page 118.

¹ American Planning Association, PAS Memo, “Alternatives to Determining Parks and Recreation Level of Service” May/June 2016

Acres per Capita Metric

Based on the New Jersey “Balanced Land Use” Standards and the NRPA Standards discussed within the call-outs below, both of which use an acres per capita metric, Monroe Township has a surplus of parkland. Today, Monroe currently has 1,195 acres of open space open for recreational purposes. This number includes parcels owned by Monroe Township, Middlesex County, and the State but does not include school fields owned by the Monroe Township Board of Education or other open space easement or conservation agreements with private property owners. These types of open space are quite numerous in the Township as many of the large planned residential developments are clustered developments with large open spaces that surround the areas dedicated to residential uses. The areas preserved by the cluster development are then generally preserved and maintained by the Homeowners Association. Additionally, there are preserved open space parcels that currently do not serve any recreational purpose as they do not have either passive recreational facilities (i.e. trails) or active recreational facilities such as ball fields or courts. It should also be noted that this does not include the private recreational opportunities, primarily golf courses, provided to the numerous active adult communities in the Township.

Table 4.1: Open Space Ownership

Ownership	Acres
State	16
County	790
Municipal	389
Total	1,195

While there is no universal standard, there are two accepted sets of guidelines used to determine whether the Township is providing adequate open space to its residents:

New Jersey Balanced Land Use Concept

According to New Jersey’s 2013-2017 Statewide Comprehensive Outdoor Recreation Plan (SCORP), the state embraces the “Balanced Land Use Concept”, which recommends at least 3% of a municipality’s developed and developable area be the minimum amount of land that should be permanently dedicated as public open space and available for appropriate, direct public recreation uses. According to the concept, land that is protected for environmental purposes and do not permit direct public access do not count toward the public recreation land supply figure.¹

Monroe’s developable land area that does not include water bodies or roads is 25,330.1 acres. To meet the 3% minimum standard for dedicated open space, the Township would need to have at least 759.9 acres where there is a total of 1,195.0 acres of dedicated open space lands – nearly 450 acres more than the recommended standard.

National Recreation and Park Association (NRPA) Standards

According to the NRPA, “the typical park and recreation agency offers one park for every 2,266 residents served, with 9.6 acres of parkland per 1,000 residents.”² With a 2020 population of 48,594 residents, Monroe should have around 466.5 acres of parkland. In comparison to the 3% standard used in the New Jersey Balanced Land Use Concept, in the context of the Township, the NRPA standard would equate to a nearly 1.8% minimum of dedicated open space. Again, Monroe has 1,195.0 acres of parkland, nearly 4.7% of the Township’s land area (not including roadway or waterbodies). Monroe Township has considerably more area for recreation taking into account the golf courses and school yard areas of the Township.

¹ New Jersey Statewide Comprehensive Outdoor Recreation Plan (SCORP) 2008-2012, Green Acres Program, NJDEP

² <http://www.nrpa.org/publications-research/ParkMetrics/>

Acres per Capita Metric by Area of Monroe

Although the Township exceeds the minimum standards as detailed on the previous page, there are other challenges such as location of parkland, increase in residential development, etc. that require further breakdown of park access by areas of the Township.

Southern Monroe

In order to understand the population changes that are occurring in Monroe Township, the consultant team used census tracts to understand where the population is increasing and what the population size is for each area. For this analysis, southern Monroe is considered to be the area generally south and east of Prospect Plains Road while northern Monroe is considered to be the general area north of Prospect Plains Road. The two areas of the Township are roughly equal in population with the census tracts making up southern Monroe having a cumulative population of 23,988 and the census tracts making up northern Monroe having a cumulative population of 24,606. However, the southern half of the Township has experienced significant population change over the past decade growing on average by 51.6%, with the area around Applegarth Rd growing particularly fast. In contrast, the northern half of Monroe grew by an average of 4.3% across the five census tracts that make up the northern half. The area along Route 33 is also projected to see a significant increase in population given the location of the Township's inclusionary affordable housing zones that are needed to conform with the state mandated settlement agreement.

The Township's provision of parks and recreational opportunities have not been able to match the residential growth that this area of the Township has experienced. There are very few publicly accessible parks besides only Monroe Township Memorial Park, the Thomas Allen Softball Complex and James Monroe Park. Together, these parks have a total area of about 330 acres, which exceeds the NRPA standard that recommends this area have about 230 acres of parkland given the population size. While the standard would indicate that there is a surplus of parkland, much of it is located near the eastern border with Manalapan Township while most of the residential growth is occurring along the western edge of the Township near Cranbury and East Windsor. The discrepancy is particularly an issue for the area south of Cranbury Station Road and near Applegarth Road, which has seen several new residential developments over the past decade. It should be noted that many of the new residential developments in this area have some

recreational amenities such as swimming pools, tennis courts and basketball courts. Existing age-restricted communities such as Concordia and Clearbrook have their own golf courses. However, these private recreational opportunities require those who don't live in these communities to pay for memberships or as Day Players to be able to access them, which is a barrier to entry compared to public recreational opportunities in the Township. The lack of recreational opportunities in this area was pointed out by residents during the public outreach phase of the Master Plan process. It is recommended that the Township explore the potential to create additional parkland in this area of the Township to meet the recreational needs of current and future residents.

Northern Monroe

The northern half of Monroe is considered to be the area of the Township generally north of Prospect Plains Road. As stated above, the census tracts that make up the northern half of Monroe have a cumulative population of 24,606 and have grown on average by 4.3%. This area of the Township is generally older and more built-out compared to the southern area of the Township, and as a result, most of the publicly accessible parks are located in this area of the Township. Consequently, this area is generally very well serviced by parkland, particularly with Thompson Park located in the north-central area of the Township. This area also has Veteran's Park and Daniel P. Ryan Park. Collectively, these parks have a total of roughly 722 acres, which far exceeds the NRPA recommendation of 236 acres for this area given the population size. There are some areas of northern Monroe where there are fewer recreational opportunities, particularly near the border with Old Bridge Township.

Facilities per Capita Metric

The facilities per capita metric helps determine if a community has enough recreation facilities. First-tier facilities are those that are municipally owned. Second-tier facilities include publicly accessible school athletic fields and other intermittent publicly accessible facilities such as homeowners' association pools, golf courses and playgrounds. Generally, the Township enjoys a mix of first and second tier recreational facilities. Again, the State, County, and Township collectively own and maintain over 1,195 acres of first tier facilities. There are an additional 896 acres of second tier facilities in the Township. Based on this metric, Monroe residents are well served by park and open space facilities.

Building Square Footage per Capita Metric

The building square footage per capita metric helps determine whether there is sufficient indoor recreational space for Township residents. Similar to the facilities per capita metric, facilities are categorized as first-tier and second-tier. The Township of Monroe offers its residents indoor recreational spaces located in the Township's Recreation Center, categorized as a first-tier facility. Second-tier facilities include school buildings that may be available for community use.

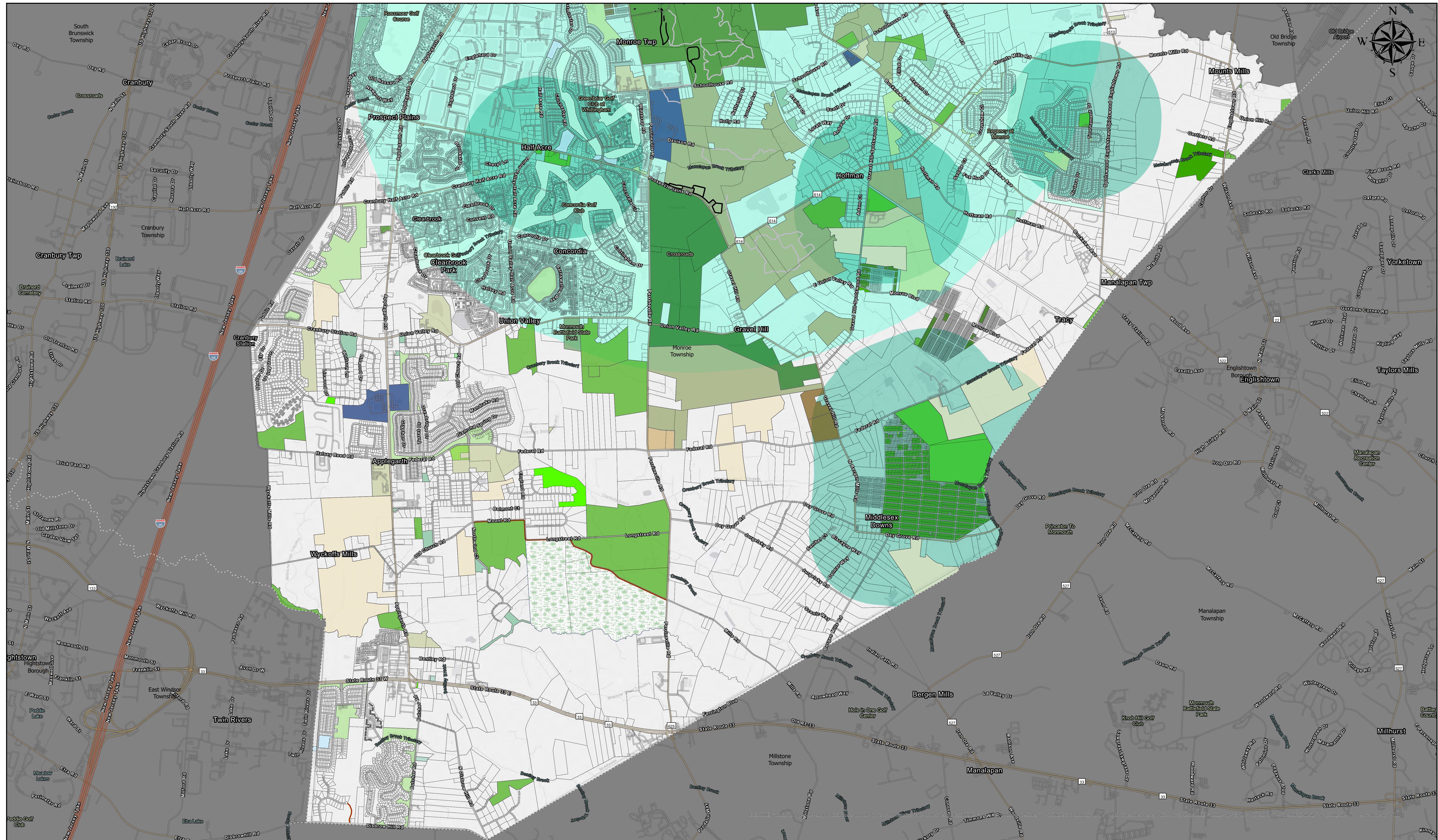
Access Distance/Time Metric

The access distance/time metric is expressed as distance or amount of time spent to travel to a park or facility. Generally, parks are accessed by those living within a half-mile distance from a park. To adequately represent the amount of time it takes to get to a park, parklands were classified by the geographic population it serves. Township Parks are generally smaller and draw users from neighborhoods that are adjacent and generally within walking distance of the park. As a result, the analysis had half-mile buffers from Township Parks, which equates to about a ten-minute walk. County Parks in Monroe Township generally serve a much larger number of residents and draw users from all over the Township as well as surrounding municipalities. A 2-mile buffer was used for these parks as visitors often drive rather than walk to them. An additional layer to this analysis was whether residents could safely walk to these locations. A household may live within walking distance of the park, but there may be at least one roadway or intersection that makes the route too dangerous to walk. Roadways with four or more lanes were identified as dangerous crossings that would essentially cut off residents from accessing the parks located on the other side of the roadway. While not utilized as a part of this analysis, it should be acknowledged that there are walking paths/trailways outside of these parks that provide additional access to recreational opportunities for Township residents.

The analysis highlighted the gaps in park facilities access that exist in large portions of the Township. In particular, the southern region of Monroe lacks park access. While many of the residences in this area have large lots, meaning residents should have some access to outdoor recreation, there are some smaller-lot and townhouse residential developments within the gap. Additionally, the residential area in the north of Monroe, directly adjacent to Old Bridge Township, is within the park facilities gap. Only three roads were identified as dangerous crossings: New Jersey Turnpike, State Route 33, and a portion of Forsgate

Drive. These crossed the buffer zones minimally and do not appear to pose a significant barrier to park access since much of the surrounding properties are commercial.

It should be noted that some of the areas with recreational gaps are communities that have their own private open space, such as Rossmoor, or areas that lack significant residential populations, such as the highway commercial area along Route 33. When conducting passive park analyses and active park analyses separately from one another, results showed relatively limited accessibility for active recreation spaces. This is due in part to Monroe's large extent and low density. Passive recreation space is much more accessible, and most parks with active recreation also include passive recreation opportunities. Thompson Park exemplifies this dynamic where the park gives users access to an extensive trail system that extends into Jamesburg, as well as numerous ball fields and playgrounds.



PROJECT #
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DATE
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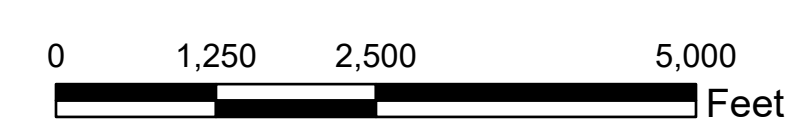
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| <ul style="list-style-type: none"> County Hiking Trails County Walking Paths Township Trails/Paths 1/2-mile Township Parks Buffer 2-mile County Parks Buffer | <p>Open Space Type</p> <ul style="list-style-type: none"> County Open Space County Parks & Recreation Municipal Farmland Preserved Municipal Open Space Municipal Parks & Recreation County Open Space County Parks & Recreation Municipal Farmland Preserved Municipal Open Space Municipal Parks & Recreation | <ul style="list-style-type: none"> Municipal Stormwater Basin Municipal Use Other Private Golf Course Private Farmland Preservation Private Open Space Private Stormwater Basin School State Farmland Preservation State Open Space State Parks & Recreation Wetlands Mitigation Bank Municipal Properties |
|--|--|--|

OPEN SPACE ANALYSIS SOUTH MAP



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Quality of Facilities and Experience Metric

While the above four metrics measure the Township's open space needs as a whole, the quality of facilities and experience metric determines whether individual parks and facilities are meeting the design and maintenance criteria established by the local community. Community-set design or maintenance criteria may include established park design guidelines including acceptable planting and material palettes. Other community-set criteria may include frequency of maintenance, safety inspections, or cleanliness. The Township should conduct a community survey to help identify community-set criteria before analyzing how each park measures up.

A recommended design criterion for the quality of facilities and experience metric is diversified amenities that meet the needs of park users of all ages and all abilities. With significant population growth in Monroe since 2010 both in the senior population and the age cohort with children, the Township will want to consider the demands of new and existing residents from all age groups. An older and aging population would generally need more passive recreation opportunities such as walking trails and may also mean greater adherence to the Americans with Disabilities Act (ADA) and Universal Design standards. At the same time, the growing population of families with children will require additional active recreational types such as basketball courts, cricket fields and other facility types that allow for group sports and games to be played. It is important to identify where the parks are located and the gaps in parks lie in relation to age-restricted versus non-age restricted communities to ensure that the right park amenities are going in relation to the communities that surround them. Identifying these gaps in park amenities can help to increase park usage and quality of life for Monroe residents.

Universal Design Standards –

Inclusive play is the promotion of interaction between individuals and families of all ages and abilities. Playgrounds that support inclusive play provide opportunities for emotional, social, physical, and development with materials, structures, and experiences that are accessible for everyone. This may include children with special needs, older adults with mobility challenges, or adults with physical challenges that impact their ability to interact with their children at play. The integration of these characteristics in a playground support a more inclusive society and allow all participants to grow and experience what parks have to offer a community.

Providing for park amenities with varying degrees of physical activity (sedentary, moderate or vigorous) ensures diversified park use by people of all ages and abilities. Walking loops, for instance, increase park use by 80% including twice as many seniors, according to a 2018 study from the National Study of Neighborhood Parks.² With increasing populations of senior citizens, this population will likely demand less physical activities and demand more wellness and fitness related recreation programs, educational programs and historic and environmental interpretive programming, according to the 2018-2022 New Jersey Statewide Comprehensive Outdoor Recreation Plan (SCORP).³

The National Study of Neighborhood Parks also found that for every play element added to a playground park use increases by 50%, which is of particular importance since a common reason for going to a park is taking children. Survey respondents listed children's play areas and playgrounds as amenities that should be added/improved at Monroe Township parks. Fitness Zones should also be considered to expand the amount of amenities provided at Township parks and improve the overall health of residents. Equally important to what amenities are provided, the Township should also consider the reasons why users may stay away, such as a lack of amenities such as restrooms and trails to access the parks.⁴

The 2018 study from the National Study of Neighborhood Parks also found that nothing increases park use as much as programming and on-site marketing (i.e. banners, posters, signs) and online outreach has proven effective at increasing park use. Monroe's Recreation Department should analyze its programming and marketing efforts to increase park use.

An analysis of the existing facility inventory (**Table 4.2**) indicates that Thompson Park provides the most facilities of any park in Monroe Township. The number of facilities provided by Thompson Park is the reason why it is considered a regional park that residents of both Monroe and the surrounding municipalities are willing to drive to. Residents who live near Thompson Park, generally those in the northern half of Monroe, are well serviced by the different facilities that Thompson

2 "Active Parks, Healthy Cities: Recommendations from the National Study of Neighborhood Parks". City Parks Alliance. 2018. https://www.cityparksalliance.org/storage/documents/active-parks-healthy-cities.pdf?mc_cid=61d75a1173&mc_eid=b8edc2e40f

3 2018-2022 New Jersey Statewide Comprehensive Outdoor Recreation Plan (SCORP), page 17

4 "Active Parks, Healthy Cities: Recommendations from the National Study of Neighborhood Parks". City Parks Alliance. 2018. https://www.cityparksalliance.org/storage/documents/active-parks-healthy-cities.pdf?mc_cid=61d75a1173&mc_eid=b8edc2e40f

Park provides. As discussed earlier, residents living in the northern half of the Township are generally well provided for parks and as a result park facilities. The most common types of facilities at parks in Monroe are soccer fields, picnic areas and baseball fields. An analysis of the Township's park facilities shows that parks in the northern half of the Township have a total of 66 facilities while parks in the southern half of the Township have a total of 18 facilities. In the southern half of the Township, there is a need for the following types of facilities:

- Basketball courts
- Biking/walking trails
- Cricket fields
- Dog park
- Football fields
- Soccer fields
- Splash park
- Tennis courts

These types of park facilities are primarily focused on active recreational opportunities that allow residents to participate in different sports and group activities. This is particularly important in this area of the Township as much of the new residential developments in this area are attracting households with children. Bike trails are also an important both for recreational purposes and as a way to connect this area of the Township with other parts of Monroe.

Overall, the Township may want to address some deficiencies that exist across Monroe. A deficiency that the Township should look to address would be the lack of bathroom facilities at the parks. Some larger parks such as Veteran's Park and Monroe Township Memorial Park, which is something that may deter residents from going to the park or staying for an extended period of time. The Township may also want to consider adding recreational options that are currently unavailable to residents, such as a skate park, or additional recreational options in high demand such as racquetball courts and cricket fields. Parks in the Township do provide a good number of biking/walking trails as well as nature trails, but survey respondents have indicated that they would like to see an expansion and improvement upon the existing trail system. A discussion of potential trail expansions can be found in the Future Open Space Plan section. Additional amenity improvements to the Township's existing parks are discussed in the Township Parks, Recreation and Open Space section.



Table 4.2 Existing Recreational Facility Inventory

	County Park		Township Park								Total
	Thompson Park	Jamesburg Park	Veteran's Park	James Monroe Park	Thomas L. Allen Softball Complex	Daniel P. Ryan Field	Monroe Township Soccer Complex	Monroe Township Community Garden	Monroe Township Memorial Park	Monroe Township Recreation Center	
Baseball Fields	3			4							7
Basketball Courts	4									2	6
Benches	✓	✓						✓	✓		4
Bike/Walking Trails	✓		✓				✓		✓		4
Boat Ramps	1										1
Community Garden								✓			1
Cricket Field			1			1					2
Disc Golf	1										1
Dog Park	1										1
Football						2					2
Fresh Water Fishing	✓	✓									2
Handball Courts	2										2
Horse Shoe Pits											0
Lacrosse											0
Nature Areas	✓			✓							2
Nature Trails	✓			✓							3
Pavilion	6										6
Picnic Area	8		1	1				1			11
Playground	3		2	1	1		1				8
Restrooms	✓			✓	✓					✓	4
Roller Hockey										1	1
Sand Box											0
Skate Park											0
Soccer Field	1		2			2	7				12
Softball Field	1			1	3						5
Splash Park			1								1
Tennis Courts	4										4
Volleyball	1										1
Total:	42	2	8	10	5	5	9	3	2	4	90

Additional Metrics

Monroe is a unique place and warrants additional metrics to those discussed above. To indicate park facility progress towards connectivity and walkability goals, the following metrics could be considered as well:

- Percentage of walkable commercial centers near to parks
- Percentage of multi-family complexes or high-density housing near to parks
- Scenic view locations
- Miles of trails
- ADA accessibility
- Multimodal bike/pedestrian/transit access
- Satisfaction Surveys

Monroe should consider these additional metrics as the Township plans for and implements improvements to its parks and open space.

Metric Maintenance

Level of Service (LOS) metrics should be reviewed and calculated annually and updated every five years to ensure that they remain reflective of the Township's needs, values, and goals. They should be reviewed by staff, user groups, key stakeholders, the general public, and elected officials to build consensus. Testing and updating these metrics regularly ensures that park and open space facilities are truly meeting residents' needs and generating the greatest benefits to its users.



Assessment

Based on the above existing conditions analysis, the greatest needs for Monroe's parks, recreational facilities and open space overall include:

- Additional park space (particularly in the southern portion of the Township)
- Supportive facilities at existing parks (i.e. parking, restrooms)
- Active recreational facilities (i.e. basketball courts, tennis/pickleball courts)
- Walking/biking connections to existing Township parks and open spaces
- Walking and biking trails around parks and open space
- Facilities that support a range of ages and abilities (i.e. ADA accessibility, Universal Design)
- Modern playground amenities

Township Parks, Recreation & Open Space

The Township has seven (7) municipal parks and has many additional open spaces. Over the years, the Township has made significant improvements to its other parks. Recent additions and the opportunity for future improvements are discussed below.

Veteran's Park Playground and Spray Park

40.49 acres, 60 Ave K

Description

Located along Avenue K on the north end of Monroe, Veteran's Park acts as an active recreational area for Township residents. The park is equipped with sport fields, playground equipment, and a spray park. There is also a memorial dedicated to Veterans and a picnic area.

Existing Facilities

Playground, Ball Fields, Picnic Area

Recent & Current Scheduled Improvements

- ADA-compliant restrooms currently being designed with plans for completion in Fall 2022 to Spring 2023
- Pavilion for picnics desired but not yet scheduled
- Expand park to add basketball courts – desired but not yet scheduled

Opportunities

- Install restrooms (currently being designed)
- Improve stormwater management to mitigate frequent flooding
- Expand and upgrade spray park
- Make ADA improvements to park
- Expand level of activities for children
- Expand walking trails
- Add sport facilities (basketball and tennis)

James Monroe Memorial Park

308.20 acres, 140 Dey Grove Road

Description

Located along Dey Grove Road on the southeast edge of the Township, James Monroe Memorial Park provides active recreation space for Monroe residents. The park is equipped with baseball fields, hiking trails, a playground, and a picnic area.

Existing Facilities

Playground, Baseball Fields, Picnic Area, Hiking Trails

Recent & Current Scheduled Improvements

ADA-compliant restrooms and new concession area currently being designed with completion anticipated for Fall 2022 to Spring 2023

Opportunities

- Updated and ADA compliant bathrooms
- Add another baseball field
- Improve lighting around batting cages
- More parking

Thomas L. Allen Softball Complex

13.70 acres, 76 Gravel-Hill Spotswood Road

Description

Located on Gravel Hill-Spotswood Road, Thomas L. Allen Softball Complex provides active recreation space for Township residents. The park is equipped with softball fields and playgrounds.

Existing Facilities

Playground, Softball Fields

Recent & Current Scheduled Improvements

Planning to pave existing parking lot in 2022.

Opportunities

None Currently Identified.

Daniel P. Ryan Field

6.00 acres, 34 North State Home Road

Description

Located on North State Home Road, Daniel P. Ryan Field provides active recreation space for Monroe residents. The park is located in the northeastern portion of the Township and is equipped with soccer, football, and cricket fields.

Existing Facilities

Ball fields

Recent & Current Scheduled Improvements

Awnings planned for future project, not scheduled yet

Opportunities

- More lighting on the track
- Improve grass on field

Monroe Township Soccer Complex

6.00 acres, Prospect Plains Road

Description

Located on Prospect Plains Road, the Township Soccer Complex provides active recreation space for Monroe residents. The park is located in the center of the Township and is equipped with soccer, football, and cricket fields.

Existing Facilities

- Ball fields
- Restrooms
- Snack Shack

Recent & Current Scheduled Improvements

- ADA-compliant playground recently completed
- Opportunities
- Add more lighting on the track

Monroe Township Memorial Park

9.25 acres, 150 Prospect Plains Rd

Description

Located on Prospect Plains Road in the center of Monroe, Monroe Township Memorial Park provides an opportunity for passive recreation for Monroe residents. The park is equipped with a walking path, gazebo and parking lot.

Existing Facilities

Walking path, gazebo, parking lot

Recent & Current Scheduled Improvements

- Create play area for children
- Add bathroom facilities

Monroe Township Community Garden

16.48 acres, 124 Applegarth Road

Description

Located on Applegarth Road in the south end of Monroe, Monroe Township Community Garden provides a community gathering space for Monroe residents. The park is equipped with an extensive gardening area and picnic tables.

Existing Facilities

Community garden, picnic tables

Recent & Current Scheduled Improvements

No recent improvements or planned at the moment.

Opportunities

- Create active recreation area
- Add more parking



Future Park or Open Space Properties

As discussed in the Recreational Level of Service section, the analysis shows and was reiterated by residents during the community outreach process that the Township is in need of additional park and recreational opportunities in the southern portion of the Township. In recent years, the Township has received a high volume of requests for cricket fields and playgrounds in this area of the Township. One potential location is the property at Block 25 Lots 14.01 and 16. The Township purchased the property and conveyed to the Board of Education to build a school at this site. As of writing, no school has been built at the site. In the event that the Board of Education decides not to use the property for schools, the Township should consider utilizing the property to provide a new park and recreational opportunity to meet the acknowledged need for new recreational opportunities in the southern area of the Township. Additional strategies for future park and recreational spaces that may include the abovementioned facilities are discussed in the following section.

Future Open Space, Parks and Recreation

Monroe has several opportunities for future parks and open space whether through willing sellers, public or private partnerships, acquisition, blue acres or green acres programs, or conservation easements. The H2M team utilized input from the Open Space Advisory Committee and Township professionals, the identified gap in the types of facilities the Township currently offers (done on page 113), the results from the publicinput.com survey and community outreach workshops and events to develop the below criteria for future open space acquisition and identify potential open space parcels.

Criteria for Future Open Space Acquisition

1. Location near Population Centers
 - a. Potential open space parcels that are located near large residential developments should be prioritized. This would create easy access for those living in the residential developments into the potential open space. The Township should proactively examine parcels for open space consideration where future residential development is slated to be located given the Township's affordable housing plan.
2. Potential Linkages
 - a. Parcels that are located adjacent to existing open space lands offer the potential for the efficient use of land for the maintenance of the open space. Connected open spaces provide greater protection for the natural environment and helps to prevent broken natural areas that can threaten habitats for native plants and animals.
3. Environmental sensitivity
 - a. Monroe Township has large areas of the Township that are environmentally sensitive. These are in the form of wetlands, streams, rivers and other watersheds. The protection of wetlands is of critical importance as the Township's wetlands provide an integral role in water quality and flood protection. With the increasing intensity of rain events, protection of the Township's floodways is a growing necessity to protect the Township's built environment. The importance of land



use with respect to floodways and wetlands is discussed in greater detail in the **Climate Change Vulnerability Assessment of the Land Use Plan**. Parcels that contain significant wetlands and watersheds should be prioritized for open space acquisition.

4. Use-specific size

- a. Prior to determining whether the size of a potential open space parcel is adequate for prioritization, the Township should assess what it anticipates using the open space for. Smaller open space parcels, those generally under ten acres, may be appropriate for active recreational uses such as playgrounds and ball fields. Passive recreation generally requires much larger tracts of land. If the Township intends to use the parcel as preserved open space, larger areas of land are preferred in order to maintain the integrity of the natural area. However, the Township should examine the potential use on a case-by-case basis and not overlook parcels that have potential based on size.

5. Relationship to natural and undeveloped open space

- a. Preservation desires are critical to put in context with nearby natural and undeveloped open spaces. Even open space acquisitions with the intention of developing parkland can allow for the conservation of large portions of the parcel that can maintain the integrity of the natural environment.

6. Cost of Acquisition

- a. The market value of the land should be compared to the open space value of the land. A project that has a moderate or low market value along with the potential to serve a large population with a quality facility should be prioritized over a more expensive property of equal open space value. Parcels that are donated to the Township don't incur a cost to the municipality. The cost of maintenance and operating expenses must also be considered. Facilities close to existing parks that can be cared for by the same agency are more cost efficient. Generally, facilities with passive activities are less costly to develop and maintain.

7. Potential for Farmland Preservation

- a. Farmland preservation project selection will be based upon the established Agricultural Development Area (ADA) developed by the County Agricultural Development Board, utilizing the criteria set forth in the Farmland Preservation element of the Master Plan. The Township should maintain an updated database of the existing farmland parcels and monitor the parcels that fit the criteria for farmland preservation but are not currently preserved.

of the Open Space element. Over the lifetime of this plan, the Township is likely to be presented with opportunities to acquire open space parcels that are not in **Table 4.3**. In those instances, the Township should utilize the criteria for evaluating potential open space parcels when deciding whether to acquire and how to plan for improvements upon potential open space parcels.

Table 4.3 below details the potential parcels that fit these criteria and accomplish many of the goals that are set out in the Open Space Element (these parcels are also shown in the Future Open Space maps). The acquisition of these parcels is also intended to help with the Potential Trail extensions that are discussed in the section below. This list of potential open space parcels is not intended to be a comprehensive list of all of the parcels in the Township that the Township should acquire during the life of this open space plan, but rather to show how the criteria above could help the Township with acquiring parcels for open space in a strategic manner that furthers the goals and objectives

Table 4.3: Potential Open Space Parcels				
Block-Lot	Ownership	Acres	Assessment	Taxes
19-1.01	Perrineville Dev, LLC	42.74	\$517,400	\$13,361.77
20-28.02	Edmund I. Acoon-Chang Revoc Trust	10.83	\$276,600	\$7,130
20-29	DiPasquale, Lucille	5.0	\$140,000	\$3,609.20
20-30	Clayton Avenue, LLC	5.0	\$140,000	\$3,609.20
130-32.01	Columbian Club of Jamesburg	8.88	\$42,200	\$1,060.48
103-48	Condry, Joyce A.	1.16	\$17,300	\$434.74
76-24	Spring Inc.	25.17	\$585,600	\$14,716.13
53-21.05	Greek's Corp	56.57	\$2,322,500	\$59,943.73
3-32	Federal Business Centers	24.2	\$10,200	\$256.33
3-31	Federal Business Centers	1.52	\$185,200	\$4,654.07
2-1	Federal Business Centers	22.0	\$2,100	\$52.77
2-3.10	DGACGJMA, LLC	7.0	\$17,500	\$439.77
4-1.02	Millstone River Preserve, Inc.	64.7	\$55,600	\$1,397.23
13-1	Millstone River Preserve, Inc.	96.3	\$44,300	\$1,113.26
54-5.01	Gash, Job Jr.	38.9	\$7,000	\$175.35

Potential Trail Extensions

In addition to the potential additions to the Township's trail network within Township-owned parks described in the **Township Parks, Recreation & Open Space** section of the Open Space element, Monroe Township has the potential to expand upon the existing trail system in the Township through partnerships with Middlesex County and other potential partners. Based on survey responses during the Township's public outreach effort, residents expressed significant interest in improving and expanding walking/biking trails within Monroe. Improvements to the trail system within Thompson Park was a significant discussion point expressed by residents. While not owned by the Township, Monroe officials should work with partners at Middlesex County to improve the trail network within Thompson Park.

In addition to the trail systems within existing parks, there is a desire and need to develop a trail network that creates linkages between residential areas, commercial areas and other points of interest within the Township. Planning work has been done previously on developing a comprehensive trail network in Monroe.

In March 2010, the firm Michael Baker International prepared the Monroe Township Bicycle and Pedestrian Planning Study in partnership with the Township and NJDOT. The consultant team reviewed this previous plan and the land use changes that have occurred since 2010 to develop a potential trail network that reflects the desires and needs of the community that were expressed during the public outreach effort.

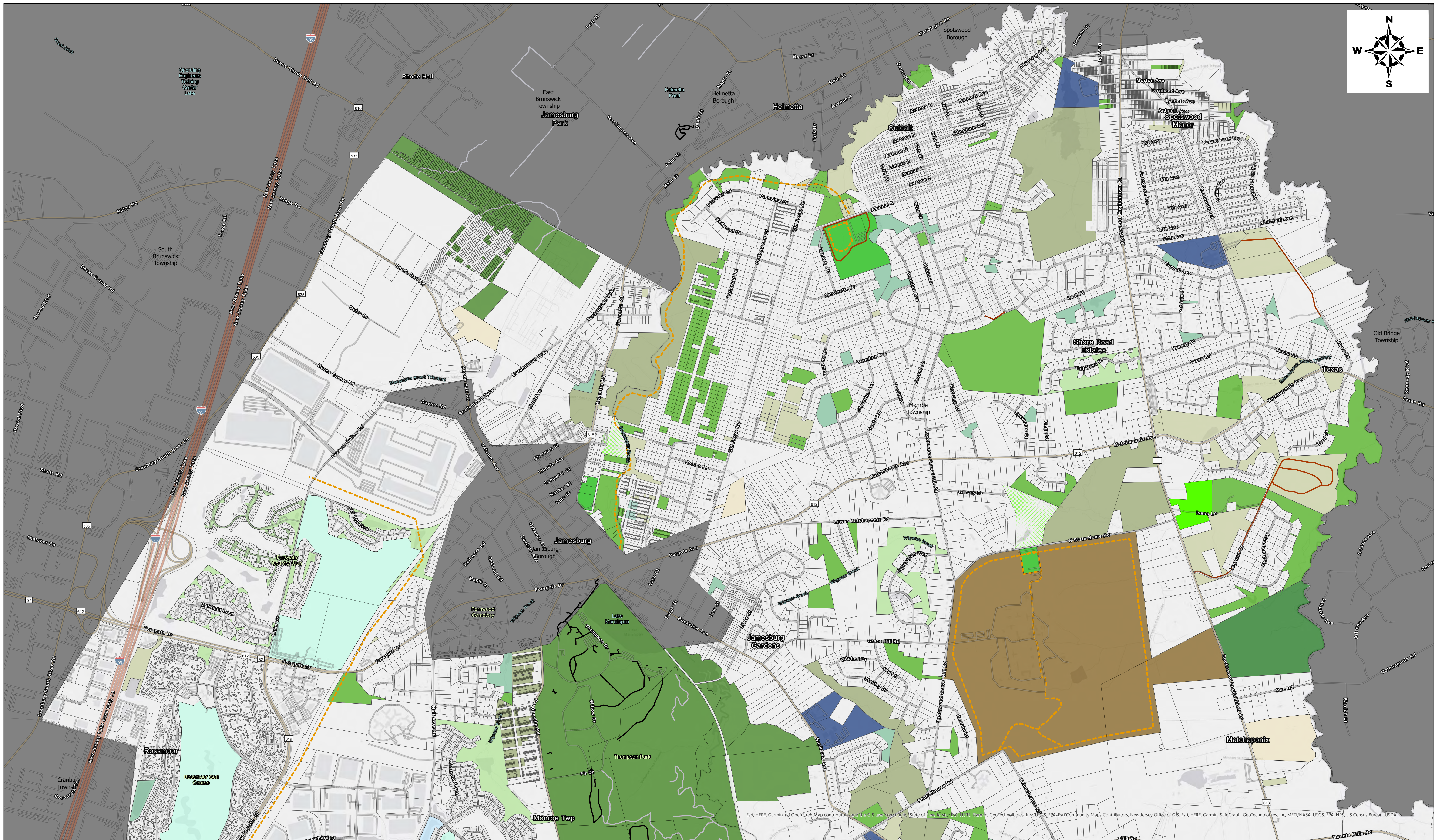
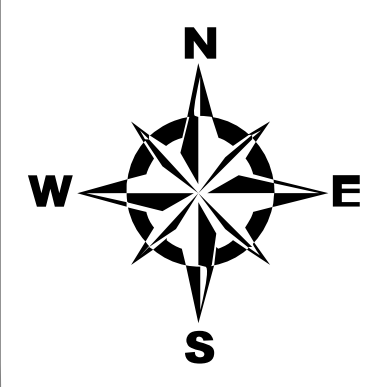
Union Valley Road Trail

Most of this area is located on state-owned preserved open space across Route 614 from the Monroe Township Soccer Complex. The trail would be able to be connected to the bike path that goes around the soccer complex. The Township should explore how to connect to the Millstone River Trail via either an on-road or off-road trail along Perrineville Road. There are several open space parcels located on either side of the roadway which have the potential to create an off-road connector trail.

Case Study: Connect Hanover, Hanover, NJ

Bicycle and walking networks are increasingly being recognized as important features for suburban communities both from a circulation perspective and a recreation and open space perspective. Connect Hanover is the bicycle network that came from Hanover Township's 2013 Pedestrian and Bicycle Connectivity Framework Plan which was seen as supplemental to the Circulation and Open Space elements of the Township's Master Plan. The trail network was developed and enhanced to connect residential neighborhoods to large corporate campuses, community facilities and parks. Wayfinding signage and overall trail enhancements as well as partnerships with Morris County have ensured the success and continued expansion of the trail network which features both off road and on road segments. The Township also designated an area along the Whippany River to ensure that the Planned River Park Town development project will include an expansion of the trail through the future development.



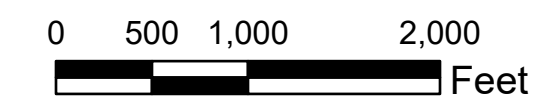


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PROJECT #	TMNR2101
DATE	July 2022
DESIGNED BY	RPC
DRAWN BY	PFC
CHECKED BY	
REVIEWED BY	

County Hiking Trails	County Parks & Recreation	Other	State Farmland Preservation
County Walking Paths	Municipal Farmland Preserved	Private Golf Course	State Open Space
Township Trails/Paths	Municipal Open Space	Private Farmland Preservation	State Parks & Recreation
Potential Trails	Municipal Parks & Recreation	Private Open Space	Wetlands Mitigation Bank
Open Space Type	Municipal Stormwater Basin	Private Stormwater Basin	Potential Open Space
County Open Space	Municipal Use	School	Municipal Properties

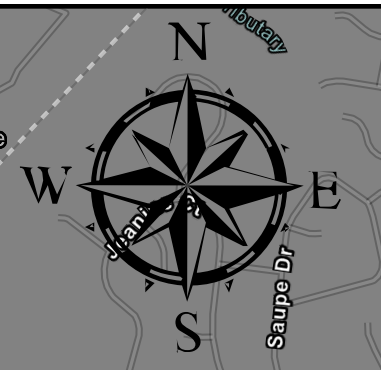
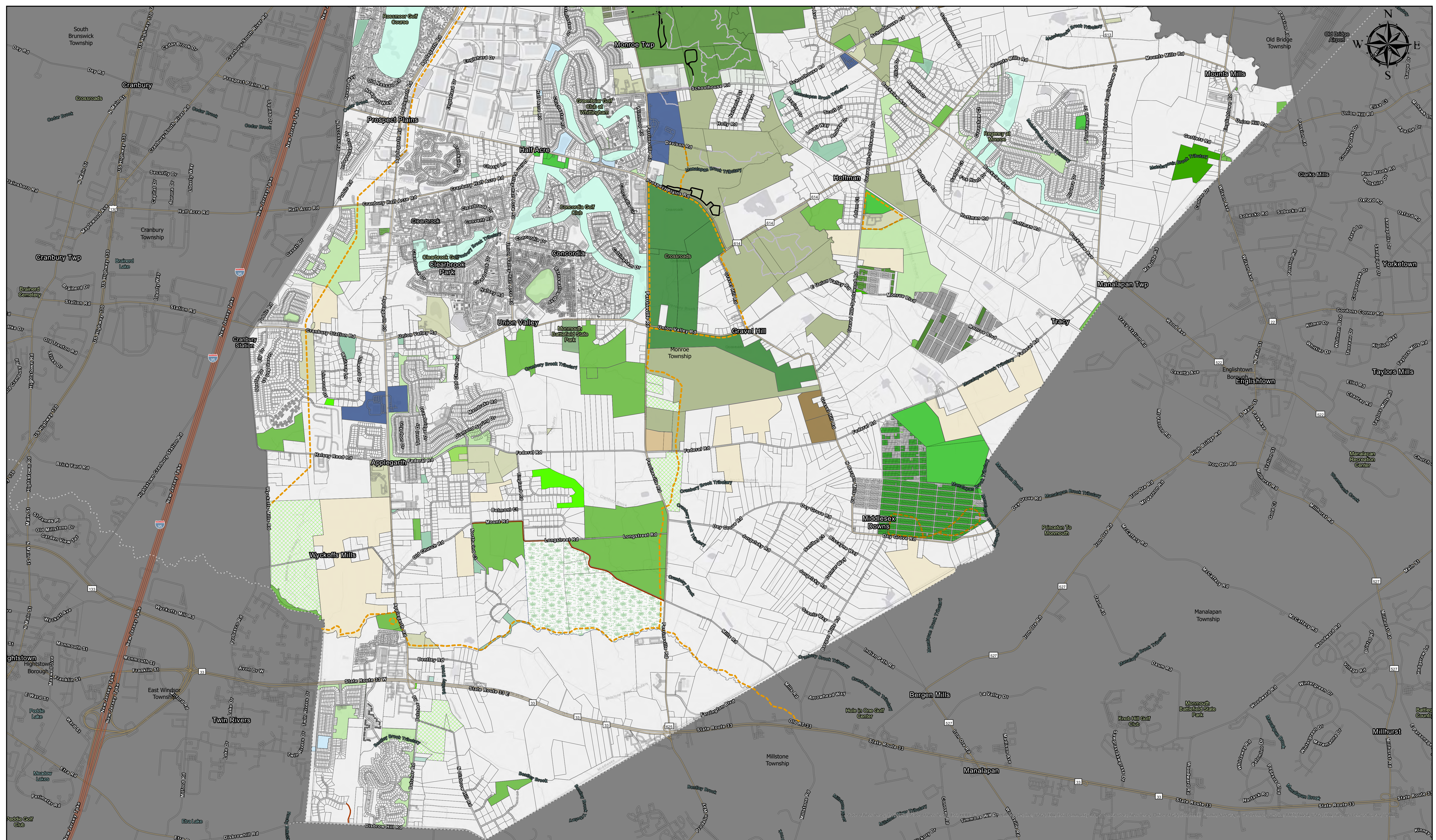
FUTURE OPEN SPACE NORTH MAP



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Melville, NY 11747
Albany, NY 12205
New York, NY 10001
White Plains, NY 10604
New City, NY 10956
Parsippany, NJ 07054
Howell, NJ 07731

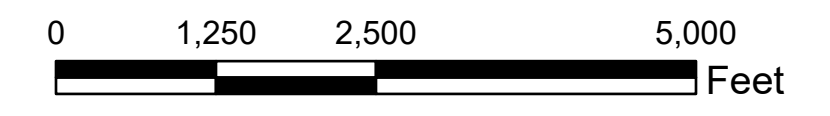
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PROJECT #	TMNR2101
DATE	July 2022
DESIGNED BY	RPC
DRAWN BY	PFC
CHECKED BY	
REVIEWED BY	

- County Hiking Trails
- County Walking Paths
- Township Trails/Paths
- Potential Trails
- County Open Space
- Municipal Open Space
- Municipal Parks & Recreation
- Municipal Stormwater Basin
- Municipal Use
- Private Golf Course
- Private Farmland Preservation
- Private Open Space
- Private Stormwater Basin
- School
- State Farmland Preservation
- State Open Space
- State Parks & Recreation
- Wetlands Mitigation Bank
- Potential Open Space
- Municipal Properties

FUTURE OPEN SPACE SOUTH MAP



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Millstone River Greenway Trail

The Millstone River Greenway Trail is a linear trail that is planned to run parallel along the northern bank of the Millstone River in the southern section of the Township from Applegarth Road to Perrineville Road. The Millstone River Greenway Trail would be located primarily on public open space with a large privately owned parcel that will need to be negotiated in order to connect to Township-owned open space on the eastern side of Applegarth Road. As discussed earlier, the Township should explore the potential to connect the Millstone River Trail to the Union Valley Road Trail. This trail would create a recreational opportunity for a fast-growing area of Monroe and could be connected to other recreational opportunities in the central section of the Township.

Manalapan Brook Trail

The Manalapan Brook Trail is a linear trail that is planned to run parallel along the Manalapan Brook's eastern bank from Veteran's Park to the Township border with the Borough of Jamesburg. This trail would be located on both public open space and privately owned parcels.

PSE&G Right-of-Way Trail

The proposed ROW trail is a linear trail located in the western section of the Township on land that would require an easement from the utility company to be located under overhead utility structures. This trail would help to create off-road linkages from the southern section of Monroe to the northern section. Because of the nature of this trail, there would need to be proactive communication and coordination with PSE&G. However, there is precedence with PSE&G allowing for off-road trails along its utility lines.

Case Study: Trolley Line Trail, West Windsor, NJ

In recent years, suburban municipalities have made significant progress with utility companies to construct walking and biking trails that run alongside the right-of-way of large powerlines. One example of this effort is the Trolley Line Trail in nearby West Windsor. The trail travels for 2.5 miles along PSEG's power lines. The trail connects several residential neighborhoods to the Community and Skate Park in West Windsor. Other examples of ROW trails include the Horsham Powerline Trail in suburban Philadelphia, which connects several community facilities in the Township to various residential neighborhoods in addition to being a widely used recreational asset.

Farmland Preservation

Monroe Township has a rich agricultural history with many active farms still operating within the municipality. The preservation of the remaining farmland is an important land use goal for the Township as it helps to maintain the high quality of life that Monroe residents enjoy. One of the tools used to preserve active farmland is the Farmland Preservation Program that stems from the Agriculture Retention and Development Act. The Act provided for county agricultural development areas, or ADAs, which are focus areas for preservation efforts. Much of the southeastern area of the Township is in an ADA with a smaller ADA located in the Matchaponix area of the Township.

The Township already has worked with its partners at the County and State levels to preserve active farmland within Monroe. To date, almost 1,200 acres of farmland are permanently preserved, accounting for 16.6% of all open space in Monroe. While the Township has been largely successful in preserving a great deal of farmland, there is more work that can be done to preserve more of the remaining farmland. For the current fiscal year, Middlesex County has targeted 33 eligible farms for future preservation. The Township should work with the County and eligible farm owners to preserve the remaining farmland that will help Monroe achieve its preservation goals.



Implementation

Monroe is financially invested in its existing and future parks, recreation facilities and open spaces. The Township currently has an Open Space Trust Fund, which was authorized by voters, funded through a 1.5-cent (per \$100 of assessed valuation) Open Space Tax. Monroe is always looking to partner with Middlesex County and the State of New Jersey to purchase additional parcels of open space. This helps the Township to share the cost with different entities during the preservation process. As an historically agricultural community, Monroe aims to preserve the remaining aspects of its rural heritage through farmland preservation. The Township actively works with the County and State Agricultural Development Commissions and aims to implement the Middlesex County Comprehensive Farmland Preservation Plan.

Open Space, Parks and Recreation Funding Sources

While open space, parks, and recreation activities are typically funded through the Township's Operating Budget, other funding sources (i.e. grants, programs) are available to support activities related to the outdoors.

State Resources

NJDEP Recreational Trails Grant

Receiving assistance from the Federal Highway Administration's Trails Program (RTP), the state of New Jersey awards grants to counties, local governments, and non-profit agencies for motorized, non-motorized and diversified use trail projects. There is a maximum grant award of \$24,000 for non-motorized projects for the construction of new trails, maintenance or restoration of trails, development and rehabilitation of trailhead facilities and trail linkages for trails (i.e. parking, signage, shelters, sanitary facilities), and the purchase and lease of trail construction and maintenance equipment. Trail feasibility studies are not eligible for funding. This grant includes a local match up to 20% of the grant. The NJDEP's Green Acres Program administers the program in New Jersey. Applications become available in March with a mid-May deadline and a notification date of December.

NJDEP Green Acres

The Green Acres program funds the acquisition of open space for recreation and conservation purposes, and the development of outdoor recreational facilities. Applications are considered on an annual basis, typically with a deadline in the first quarter of the

year. To qualify to participate in many of the funding programs, the Township must have an open space trust fund and a Green Acres approved Open Space and Recreation Plan (OSRP).

County Resources

Middlesex County Open Space, Recreation, and Farmland and Historic Preservation Trust Fund

The Middlesex County Open Space, Recreation, and Farmland and Historic Preservation Trust Fund supports open space preservation, recreational development, and historic preservation. The trust fund program is used to acquire open space land and develops recreational facilities and programs in partnership with its constituent municipalities. Originally established in 1996, the Trust Fund was expanded in 2001 and dedicates \$0.03 per \$100 of the total equalized assessed valuation in the County tax rate to support open-space preservation, recreational development, and historic preservation.

Other Non-Profit and Organizational Resources

National Recreation and Park Association (NRPA)

The NRPA is a national non-profit professional organization that promote the funding and improvements of recreational facilities, parks, and open space for health and wellness, conservation and social equity. The organization advocates and educates on the importance of open space in the community while providing resources and partnerships to municipalities and stakeholders. The NRPA also provides grants and hosts information on funding opportunities for parks and open space.

The Land Conservancy of New Jersey

The Land Conservancy is a non-profit organization dedicated towards the preservation of land and water resources, conservation of open space, and the development of stewardship in New Jersey. The conservancy provides technical assistance to landowners on preservation options, and to municipalities in community planning for land acquisition, recreation and design for a variety of open space, trails, and park management plans. They also assist in land preservation for towns through transactions and funding and provide assistance in certification for Sustainable Jersey.

Open Space Plan Element Recommendation Table

Directions

“Check off” a completed Recommendation and mark the year of completion as a way to measure progress.

Short: complete in 1-2 years; **Medium:** complete in 3-5 years; **Long:** complete in 10+ years.

Open Space Plan Element Recommendation Table

	<i>Recommendation</i>	<i>Implementing Party</i>	<i>Timeframe</i>	<i>Completed</i>	<i>Year Completed</i>
General					
1	Consider conducting a park specific survey to measure the level of service for each of the Township’s parks.	Recreation Department	Medium		
2	Ensure park facilities align with the surrounding population demographics.	Recreation Department	Ongoing		
3	Review marketing efforts to increase park usage.	Recreation Department	Short to Medium		
4	Utilize the assessment conclusion on page 113 of the Plan when considering park improvements and open space acquisitions.	Open Space Committee, Township Administrator	Ongoing		
5	Utilize the Criteria for Open Space Acquisition as detailed on pages 118-120 when planning for future open space acquisition.	Open Space Committee, Township Administrator, Township Council	Ongoing		
6	Review the Potential Open Space Parcels in Table 4.3 and consider potential acquisition of parcels.	Open Space Committee, Township Administrator	Short to Medium		
7	Work with Middlesex County and eligible farm owners to preserve farms targeted by the County’s Farmland Preservation program.	Open Space Committee, Township Administrator	Short to Long		
8	Consider creating an Open Space zone to cover large, contiguous parcels of open space to ensure that parcels remain as open space.	Planning Board, Township Council	Short to Medium		
9	Perform an update to the Township’s ROSI and continuously update the ROSI as additional open space parcels are acquired.	Open Space Committee, Township Administrator	Short		
Trails					
10	Consider fitness zones as a trail amenity as a part of the proposed trail expansions detailed throughout the Plan.	Township Administrator, Recreation Department	Medium to Long		
11	Utilize the expansion of bike trails to connect different areas and neighborhoods of Monroe.	Township Administrator, Township Council	Medium to Long		

Open Space Plan Element Recommendation Table

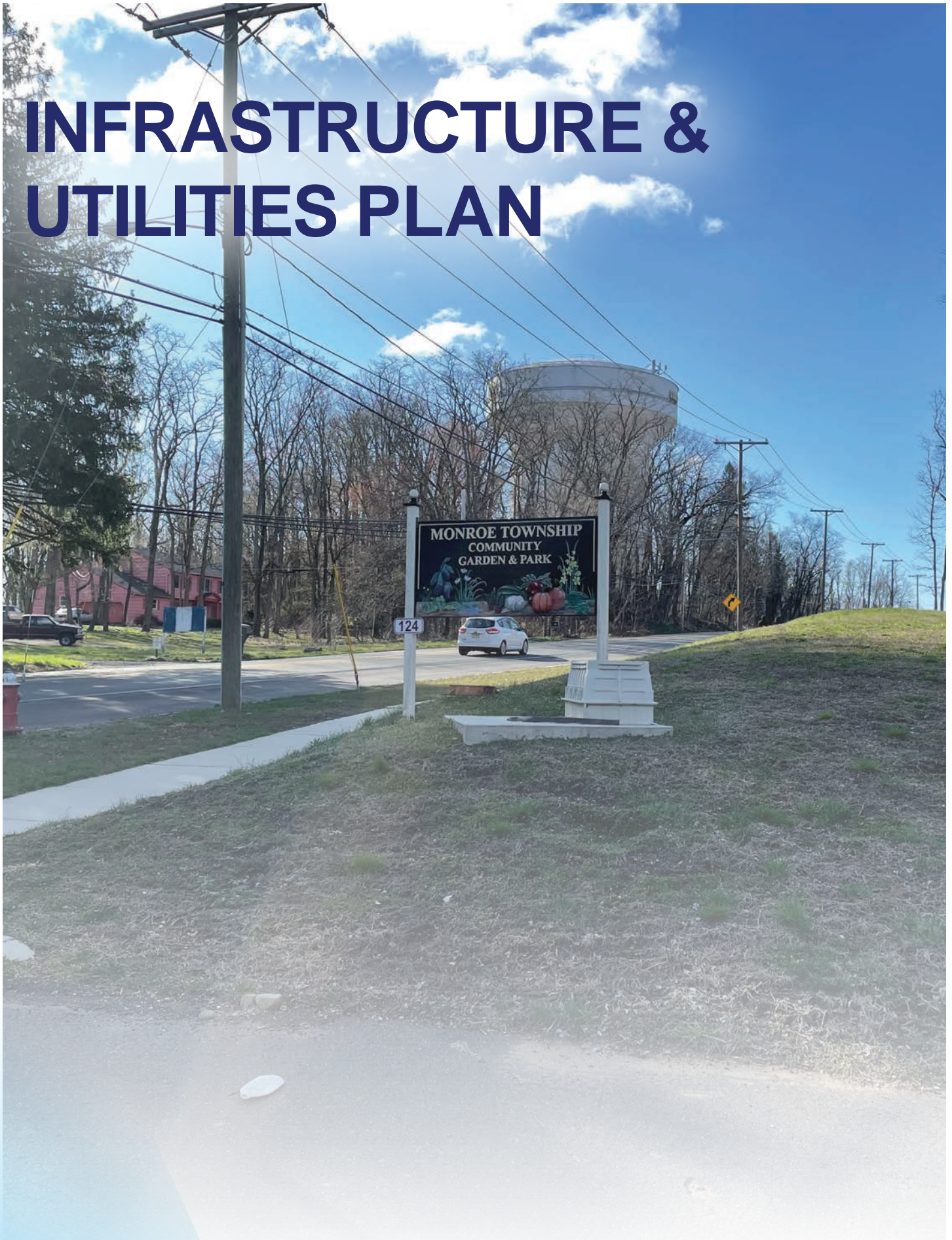
	<i>Recommendation</i>	<i>Implementing Party</i>	<i>Timeframe</i>	<i>Completed</i>	<i>Year Completed</i>
12	Work with Middlesex County to improve the trail network within Thompson Park.	Township Administrator, Township Council, Middlesex County	Short to Medium		
13	Utilize Township owned parcels to create a greenway trail along the Millstone River.	Township Administrator, Township Council	Short to Medium		
14	Develop trail around Soccer Complex and connect trail to Millstone River utilizing existing and proposed open space parcels.	Township Administrator, Township Council	Medium to Long		
15	Create a linear trail along the Manalapan Brook from Veteran's Park to Township border.	Township Administrator, Township Council	Medium to Long		
16	Reach out to PSE&G about an easement along the utility right-of-way to create an off-road trail.	Township Administrator	Short to Medium		
Parks					
17	Focus attention on parkland expansion in the southern half of the Township, particularly around the Applegarth Road corridor.	Township Administrator, Township Council, Open Space Committee	Short to Long		
18	Ensure ADA compliance at all Township parks.	Recreation Department	Short to Medium		
19	Consider adding additional children's play areas at Township Parks.	Township Council, Recreation Department	Short to Medium		
20	Consider adding the recreational facilities as detailed on page 113 of the Plan to fill the facilities gap in the southern half of Monroe.	Township Administrator, Township Council, Recreation Department	Short to Long		
21	Install permanent restroom facilities at Veteran's Park.	Township Council, Recreation Department	Short to Medium		
22	Explore the potential to add in-demand recreational facilities as the Township sees fit.	Township Council, Recreation Department	Medium to Long		
23	Expand upon existing facilities in Veteran's Park (i.e. spray park, walking trails, sports fields, children's activities).	Recreation Department	Short to Medium		
24	Add additional parking and another baseball field at James Monroe Park.	Recreation Department	Medium		

Open Space Plan Element Recommendation Table

	<i>Recommendation</i>	<i>Implementing Party</i>	<i>Timeframe</i>	<i>Completed</i>	<i>Year Completed</i>
25	Improve lighting at James Monroe Park.	Recreation Department	Medium to Long		
26	Provide additional lighting and improve grass fields at Daniel Ryan Field.	Recreation Department	Short to Medium		
27	Add lighting to the track at the soccer complex.	Recreation Department	Medium		
28	Explore the potential to add active recreation at the community garden.	Township Administrator, Recreation Department	Medium		
29	Add additional parking at community garden.	Township Administrator	Medium		
30	Explore the potential to create a recreational opportunity at Block 25 Lots 14.01 and 16 in the event that the Board of Education decides not to use those parcels for schools.	Township Council, Township Administrator	Medium		

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INFRASTRUCTURE & UTILITIES PLAN



Introduction

This Infrastructure and Utilities element discusses the public and private utilities currently available in Monroe Township. The New Jersey Municipal Land Use Law (MLUL) outlines the Utilities element as an optional component of the Master Plan. According to the MLUL, a utility service plan element shall analyze “the need for and showing the future general location of water supply and distribution facilities, drainage and flood control facilities, sewerage and waste treatment, solid waste disposal and provision for other related utilities, and including any stormwater management plan.” It is essential that Monroe Township proactively plans for the Township’s utilities systems, which provide residents with access to clean drinking water, sanitary sewer collection, and proper stormwater management collection. This element will evaluate the existing utility systems in the Township of Monroe and will recommend improvements to ensure these systems remain adequate for current and future residents.

In addition to the MLUL, the Township’s utility, specifically its public water system, is governed by the Water Quality Accountability Act, P.L. 2017, c. 133 (WQAA). The WQAA, enacted in 2017 and amended in 2021, established new requirements for purveyors of public water to improve the safety, reliability, and administrative oversight of water infrastructure. Chief among these new requirements is the requirement that purveyors create and implement an asset management plan designed to inspect, maintain, repair, and renew its infrastructure consistent with standards established by the American Water Works Association. The Township of Monroe and the Monroe Township Utility Department (MTUD) operate a public water system that is recognized as a leader in exceeding compliance with the WQAA and continue to take efforts to maintain this excellence in regards to WQAA compliance. The MTUD continues to be proactive in planning for the future to ensure continued compliance with the WQAA.

Goals

- 1. Achieve coordination between the extension of utilities with the growth policies of the land use plan.**
- 2. Ensure the continued adherence to the Water Quality Accountability Act.**
- 3. Ensure that water infrastructure planning coincides with meeting future growth due to the statewide affordable housing mandate.**
- 4. Assure that all new developments are accompanied by a developer's agreement that the developer reimburses the Township with its fair share in funding for infrastructure capacity expansion.**
- 5. Prevent the contraction of the non-sewer service area of the Township.**
- 6. Continue to analyze the most effective and efficient means for providing adequate flow and fire pressure service in the Township.**

Goals and Recommendations

Rational Nexus

One of the major components of this Comprehensive Master Plan was to ensure that goals and recommendations were supported and derived from the significant public input solicited over the course of the development of the plan. Below is a summary of the public input themes received by the Master Plan team related to Infrastructure and Utilities, which have formed the basis of the goals and recommendations of this Element.

Water and Sewer

- Base water allocations on projected build out
- Limit growth in areas of the Township with limited sewer and water
- Provide safe and clean water to all residents
- Ensure repair of sewer lines and grids

Electric and Gas Reliability

- Need for greater consistency of the power grid in the southern half of Monroe
- Improve electricity to prevent power outages in residential developments
- Review and repair infrastructure and soils
- Continue to promote underground utilities

Sustainable Energy Systems

- Promote the use of renewable sources
- Incorporate community solar projects into Monroe's power grid
- Provide electric vehicle charging stations throughout the Township

Implementation of the "Energy Aggregation Program"

- Municipality purchases bulk of energy on behalf of residents to reduce average price
- Promote community wide implementation of LED lights and solar power grids
- Provide electric vehicle charging stations to encourage use of electric vehicles

Internet

- Allow more providers from different companies to grant internet access to residents

Water Supply System

Monroe's water is supplied by the Monroe Township Utility Department (MTUD). The MTUD operates a single integrated distribution system which services most of the developed portions of the Township. The existing water supply is derived from nine (9) groundwater wells that are owned and operated by the MTUD. **Table 5.1** shows the total treatment system capacity as of writing.

Table 5.1: Existing Well Capacity January 2022 to November 2022

	Wells or Surface Water Source	Pumping Capacity	Treatment Capacity	Limiting Capacity
1	Well #5	500	0	0
2	Well #8A	1,000	1,000	1,000
3	Well #16A	1,100	1,100	1,100
4	Well #17	800	800	800
5	Well #19	800	800	800
6	Well #20	2,300	2,300	2,300
7	Well #21	2,000	2,000	2,000
8	Well #22	1,200	1,200	1,200
9	Well #23	2,500	2,200	2,200
	Total GPM	11,900	11,400	11,400
	Total MGD	17.14	16.42	16.42
	Firm Capacity (Well No. 20 off-line)			13.10

Source: R3M Engineering, Inc. Bureau of Water System Engineering Master Permit

During 2022, the MTUD will put Well #25, currently nearing completion, into operation. This will bring the number of groundwater wells to ten (10) with Well #5 being used solely for irrigation purposes. Treatment is required for the water from these wells as the MTUD is required to comply with all state and federal regulations. This system's source water comes from the following aquifers: the Old Bridge Sand Aquifer and the Farrington Sands Aquifer. The MTUD has emergency interconnections with South Brunswick Water Division, Spotswood Borough Water Department and New Jersey American Water for additional water in case of emergencies. There are also a limited number of private wells serving some properties in the Township. In order to provide adequate pressurization of the system's water supply, the Township owns and operates a system of strategic storage tanks that are critically important for public health, water pressure, and fire service pressure. The system far exceeds the minimum requirements of the state.

Monroe Township, as discussed throughout this Master Plan, has experienced significant population growth in recent years. Given the Township’s requirement to meet the state’s affordable housing mandate, further residential growth is anticipated. The MTUD has been proactive in planning for this anticipated growth through the increase in the water supply system’s capacity. As mentioned earlier, the MTUD is currently constructing a new supply well and potable water treatment facility, Well #25, with an anticipated substantial completion date of November 2022. **Table 5.2** details the well capacity of the Township upon completion of Well #25. As shown, Well #25 will significantly increase the system’s total treatment capacity and eliminate key existing bottlenecks. This increase in capacity is a key component in the Township’s continued water infrastructure improvements in compliance with the WQAA.

Table 5.2: Existing Well Capacity as of November 2022

	Wells or Surface Water Source	Pumping Capacity	Treatment Capacity	Limiting Capacity
1	Well #5	500	0	0
2	Well #8A	1,000	1,000	1,000
3	Well #16A	1,100	1,100	1,100
4	Well #17	800	800	800
5	Well #19	800	800	800
6	Well #20	2,300	2,300	2,300
7	Well #21	2,000	2,000	2,000
8	Well #22	1,200	1,200	1,200
9	Well #23	2,500	2,200	2,200
10	Well #25	1,500	1,500	1,500
	Total GPM	13,700	12,900	11,400
	Total MGD	19.73	18.58	18.58
	Firm Capacity (Well No. 20 off-line)			15.27
Source: R3M Engineering, Inc. Bureau of Water System Engineering Master Permit				

In addition to the ongoing capacity expansion efforts, the MTUD is also proactively planning for and managing its water infrastructure. The MTUD works with a consultant to provide ongoing hydraulic modeling services as the Township continues to experience growth. In addition, the hydraulic modeling engineer provides comprehensive review and analysis of various land use applications before the Township’s boards. This helps to ensure that the Township has the ability to meet new demands on the system as each relevant application comes before the Township.

Sanitary Sewers

Most of Monroe’s properties are serviced by the Wastewater Division of the Middlesex County Utilities Authority (MCUA), which operates a regional treatment plant in Sayreville, NJ. At the plant, sewerage is treated to meet or exceed environmental standards before it is discharged into the Raritan Bay. R3M Engineering, Inc. provided the MTUD a Regional Wastewater Planning Summary report dated June 26, 2020 detailing a summary of the overall status of major sewerage infrastructure within the Township.¹ The following conditions are based on that report and changes that have occurred thereafter.

The Township’s sewerage system is operated within two distinct Service Areas: the Outcalt Service Area (OSA) and the Ashmall Service Area (ASA). Sewage is collected by lateral sewers and flows through the various sub-areas to the Outcalt Pump Station #6 and the Ashmall Pump Station #7. The OSA collects sewage within the western and southern portions of the Township as well as the Boroughs of Helmetta and Jamesburg. As a result of the Township’s mandated affordable housing agreement, the majority of new development is anticipated to occur in the OSA. The MTUD’s largest pump station, Pump Station #6, is located near Veterans Park on Avenue K, which pumps the majority of the Township’s sanitary sewage approximately five (5) miles to the MCUA interceptor in East Brunswick where MCUA’s pipe network carries it to the regional treatment plant. Leading to Pump Station #6 are multiple pump stations of various sizes throughout the Township which pump these areas ultimately to Pump Station #6.

The ASA collects the sewage generated within the northeastern portion of the Township. This flow is collected at Pump Station #7, which is located at the eastern terminus of Ashmall Avenue and pumps all sewage from the ASA to the MCUA sewage treatment plant in the South River Interceptor and ultimately to the Sayreville treatment plant. Pump Station #16 is the only other pump station within the ASA. The total future flow that could be generated within this Service Area is currently limited by the 2 MGD maximum instantaneous peak flow rate.

Every pump station is in good condition, but some require preventive maintenance and capacity upgrades based on age and anticipated growth of the Township. The R3M June 2020 report recommended several infrastructure improvement projects for the MTUD to meet anticipated demand.

¹ Monroe Township Utility Department Regional Wastewater Planning Summary. R3M Engineering, Inc. June 2020.

The Township and the MTUD are proactively addressing these recommendations, and the following upgrades are slated to be designed and constructed in the near future.

- Outcalt Pump Station #6 eliminate 30-inch Force Main bottleneck and conditions upgrades
- Pump Station #2 rehab and upgrades currently in design stage and will be constructed in 2023
- Monroe 33 Pump Station #14 rehab and upgrades

Floodplain Management Plan

Due to the many brooks and streams flowing through Monroe, there is a significant amount of land vulnerable to flooding. The Township has addressed these risks by designating the Flood Hazard/Conservation District, which is based on the flood hazard areas delineated by the Federal Emergency Management Agency (FEMA) and the New Jersey Department of Environmental Protection (NJDEP). This zoning district has regulations which limit certain kinds of development and provide design requirements to mitigate flood risks. More information can be found in the **Zoning Districts Description** and the **Climate Change Vulnerability Assessment** sections of the **Land Use** element.

Stormwater Management

Stormwater management is a critical component of infrastructure, with increasing importance as climate change continues to bring increasingly intense storms. Developed areas with impervious surfaces cause stormwater from rain events to travel over hardened surfaces before either draining into a nearby waterway or into a town's drain system. Along the way, stormwater picks up contaminants such as oil and chemicals which can harm local waterways. Stormwater management is required to mitigate water quality impacts during rain events.

In Monroe, stormwater management is affected by NJDEP rules and regulations which are intended to mitigate pollution impacts. Aside from NJDEP regulations, local ordinances and management activities provide best management practices for stormwater management infrastructure. Impervious surface limitations, enforced by the Township, are another important component of stormwater management. Sustainable stormwater management methods are encouraged by the Township's ordinances, which provide best management practices and low-impact development strategies.

Telecommunications

Federal Collocation

The New Jersey State League of Municipalities recommends municipalities develop new application forms that will ensure wireless telecommunication applicants are able to determine whether their project is an "eligible facility", which must be mandatorily approved, or if the project involves a "substantial change", which will require municipal board approval per the FCC rules. Municipalities should also develop new checklists for wireless communication applications so land use boards can review applications in accordance with the FCC timeframes that differ from the customary timeframes set forth in the Municipal Land Use Law.

Small Cell Wireless Facilities

Recent developments in wireless technologies, specifically 5G, require the placement of Small Cell Equipment and Wireless Cabinets on utility poles within the public rights-of-way. Municipalities may recover the costs of processing applications for the placement of such equipment on existing poles, but municipalities may not seek revenue for telecommunication facilities in the rights-of-way, pursuant to the Municipal Land Use Law. Municipalities also have the power to zone these structures and may set standards in relation to the siting of small cell equipment, wireless cabinets, and wireless poles within the public rights-of-way. Reasons for such standards can include safety concerns such as blocking sight triangles and concerns of the rights of the public to access the public rights-of-way. Monroe Township has not adopted and published aesthetic requirements for Small Cell Equipment by April 15, 2019, meaning they may have lost the ability to impose aesthetic regulations.

Electric and Gas Utilities

Various private companies provide utilities for Monroe. Gas is provided by PSE&G, while Jersey Central Power and Light provides electricity. Other private utilities include cable television and telephone service. Because private utilities are paid for by the homeowner or renter, extension and maintenance of these services are not dependent on municipal funds. While Monroe Township does not have jurisdiction over private utilities, the municipality should be aware of these private utility companies providing services to Township residents. PSE&G owns a utility line which runs north-south on the western end of the Township. This utility line is being considered for a right-of-way trail. This is further discussed in this plan's **Open Space and Recreation Element**.

Utility Funding Sources

While utilities are typically funded through the Township's Operating Budget or Capital Improvement Plan (CIP), other funding sources (i.e. grants, programs) are available including the 2021 Infrastructure Law and other federal, state, and private funding programs.

Federal Resources

The Water Infrastructure Finance and Innovation Act (WIFIA) is a program administered by the EPA that offers low interest loans for wastewater infrastructure projects. Eligible borrowers include state and local governments, partnerships, and corporations. The WIFA program can also fund development and implementation for projects that are already eligible for the Clean Water SRF and the Drinking Water SRF. The Army Corp of Engineers provides planning, design, and construction assistance for environmental-related water and sewer projects around the country. The Corps must have an authorization from Congress before starting a project or study. To get an authorization, the applicant must submit a request for assistance to the upcoming Water Resource Development Act.

2021 Infrastructure Law

In 2021, the federal government passed the Infrastructure Investment and Jobs Act aimed at addressing the nation's infrastructure needs. Based on the funding formula, New Jersey is slated to receive approximately \$8.1 billion in federal highway formula funding for highways and bridges over the next five years as a result of the legislation. There will be a number of infrastructure-based distribution programs for water, sewer, high speed internet, climate change resiliency, and electric vehicle infrastructure including vehicle charging stations. The Township should monitor these programs as they are rolled out in order to capitalize on the funding allocations to the state.

State Resources

The Clean Water State Revolving Fund (CWSRF) program provides low-interest loans for the construction of a variety of water quality protection measures, including wastewater treatment facilities and storm water and nonpoint source management facilities. Eligible borrowers include municipalities, counties, and utility authorities. The Drinking Water State Revolving Fund (DWSRF) program is a federal-state partnership to help ensure safe drinking water. The program provides financial support to all 50 states. The state matches this contribution, and the money is used to provide low interest loans to fund water infrastructure projects. As the loan is paid back, more loans are issued for new projects.

Other Resources

The American Public Power Association's Demonstration of Energy & Efficiency Developments (DEED) is a program that provides grants to municipal utility departments to improve public power utilities. The applicant must demonstrate that new and innovative technologies are being explored in order to improve public utility service, reduce costs, or offer new types of utility services to customers. Grants can range anywhere from \$25,000 to \$125,000.

Infrastructure and Utilities Element Recommendations

General Utility Systems

The following recommendations are offered regarding general utility systems:

1. Achieve coordination between the extension of utilities with the growth policies of the land use plan.
2. Explore extensions of utilities by developers and private property owners through fair share cost reimbursement agreements.
3. Continue to exceed compliance with the requirements of the Water Quality Accountability Act.
4. Ensure developers are subject to funding a proportionate share of any off-tract improvements for utility services, to the extent permitted by law.
5. Mitigate the potential for flooding impacts.
6. Require existing above ground utilities to be relocated underground for redevelopment projects, to the extent allowed by law.
7. Require co-location of new telecommunications facilities whenever feasible.
8. Consider Asset Management program inclusive of field conditions assessment and geolocation through GPS.

Water Quality and Supply

The following recommendations are offered regarding water supply.

1. Explore the creation of wellhead protection zones around public water supply wells to limit development in the watershed and look for opportunities to preserve properties within the well protection zone.
2. Prevent the contraction of the non-sewer service area of the Township.
3. Seek protection or acquisition measures for undeveloped properties in areas of high aquifer recharge.
4. Where possible, require public water service to new development rather than private wells.

Wastewater

The following recommendations are offered regarding wastewater.

1. Based on the Township's 2022 Land Use Plan and buildout analysis identify the required conveyance and treatment capacity in order to determine future facility requirements.
2. Examine inflow and infiltration in Monroe Township and implement programs to reduce and to minimize illicit connections.
3. Require that new development within the sewer service area be served by sewer, and all new development should be served by public water.

Stormwater

The following recommendations are offered regarding stormwater collection and conveyance.

1. Continue to update Township ordinances to conform to the latest stormwater management regulations and the Residential Site Improvement Standards (RSIS).
2. Stream cleaning projects should be implemented in areas with elevated normal water surface levels and flooding and combined with public education for area residents on the benefits of stream cleaning.
3. Require new development to assess capacity of existing infrastructure and ensure repairs, replacements and upgrades to existing infrastructure occur in concert with development.

Electric and Gas Utilities

The following recommendations are offered electrical and gas infrastructure:

1. Require underground infrastructure in all new developments including distribution extensions.
2. Consider streetscape enhancement projects in redevelopment/ rehabilitation areas which take existing above infrastructure and require it to be reconstructed underground.
3. Ensure that all new developments include the required number of electric vehicles charging stations.
4. Consider municipal or regional aggregation purchase to reduce energy cost burden on residents.
5. Consider alternative energy sources at all public facilities including solar and geothermal systems.

Infrastructure and Utilities Plan Recommendations

Directions

“Check off” a completed Recommendation and mark the year of completion as a way to measure progress.

Short: complete in 1-2 years; **Medium:** complete in 3-5 years; **Long:** complete in 10+ years.

<i>Recommendation</i>	<i>Implementing Party</i>	<i>Timeframe</i>	<i>Completed</i>	<i>Year Completed</i>
General Utility Systems				
1 Achieve coordination between the extension of utilities with the growth policies of the land use plan.	Township Council, MTUD	Ongoing		
2 Explore extensions of utilities by developers and private property owners through fair share cost reimbursement agreements.	Township Council, MTUD	Short		
3 Continue to exceed compliance with the requirements of the Water Quality Accountability Act.	Township Council, MTUD	Ongoing		
4 Ensure developers are subject to funding a proportionate share of any off-tract improvements for utility services, to the extent permitted by law.	Township Council, MTUD	Short		
5 Mitigate the potential for flooding impacts.	Township Council, MTUD	Medium		
6 Require existing above ground utilities to be relocated underground for redevelopment projects, to the extent allowed by law.	Township Council, MTUD	Short		
7 Require co-location of new telecommunications facilities whenever feasible.	Township Council, MTUD	Short		
8 Consider Asset Management program inclusive of field conditions assessment and geolocation through GPS.	Township Council, MTUD	Short		
Water Quality and Supply				
9 Explore the creation of wellhead protection zones around public water supply wells to limit development in the watershed and look for opportunities to preserve properties within the well protection zone.	Township Council, MTUD	Short		
10 Prevent the contraction of the non-sewer service area of the Township.	Township Council, MTUD	Ongoing		
11 Seek protection or acquisition measures for undeveloped properties in areas of high aquifer recharge.	Township Council, MTUD	Short		
12 Continue to provide potable water to the Township.	Township Council, MTUD	Ongoing		
13 Where possible, require public water service to new development rather than private wells.	Township Council, MTUD	Short		
Wastewater				
14 Based on the Township’s 2022 Land Use Plan and buildout analysis identify the required conveyance and treatment capacity in order to determine future facility requirements.	Township Council, MTUD	Medium		
15 Examine inflow and infiltration in Monroe Township and implement programs to reduce and to minimize illicit connections.	Township Council, MTUD	Medium		
16 Require that new development within the sewer service area be served by sewer, and all new development should be served by public water.	Planning Board, Zoning Board, Township Council	Short		

<i>Recommendation</i>	<i>Implementing Party</i>	<i>Timeframe</i>	<i>Completed</i>	<i>Year Completed</i>
Stormwater				
17 Continue to update Township ordinances to conform to the latest stormwater management regulations and the Residential Site Improvement Standards (RSIS).	Township Council, MTUD	Short		
18 Stream cleaning projects should be implemented in areas with elevated normal water surface levels and flooding and combined with public education for area residents on the benefits of stream cleaning.	Township Council, MTUD	Medium		
19 Require new development to assess capacity of existing infrastructure and ensure repairs, replacements and up-grades to existing infrastructure occur in concert with development.	Planning Board, Zoning Board, MTUD	Medium		
Electric and Gas Utilities				
20 Require underground infrastructure in all new developments including distribution extensions.	Planning Board, Zoning Board, MTUD	Short		
21 Consider streetscape enhancement projects in redevelopment/rehabilitation areas which take existing above ground infrastructure and require it to be reconstructed underground.	Planning Board, Zoning Board, MTUD	Medium		
22 Ensure that all new developments include the required number of electric vehicles charging stations.	Planning Board, Zoning Board, MTUD	Short		
23 Consider municipal or regional aggregation purchase to reduce energy cost burden on residents.	Township Council	Medium		
24 Consider alternative energy sources at all public facilities including solar and geothermal systems.	Township Council	Medium		

RECYCLING PLAN



Introduction

The New Jersey Statewide Mandatory Source Separation and Recycling Act of 1987 requires Municipal Master Plans include provisions for Recycling. Per the Municipal Land Use Law (MLUL), a municipality can optionally incorporate a Recycling Element that must incorporate State Recycling Plan goals, designate the provisions for the municipal recycling ordinance, and develop recycling standards for developments over 50 units of single-family residential or 25 or more units of multi-family housing and any commercial or industrial development on 1,000 square feet or more of land.

Solid waste disposal and recycling in the State of New Jersey is regulated by the New Jersey Department of Environmental Protection (NJDEP), pursuant to the New Jersey Solid Waste Management Act. The Act designated all 21 counties as Solid Waste Management Districts, in which these jurisdictions are required to develop comprehensive plans for waste management. The Middlesex County Department of Solid Waste Management was created by the Middlesex County Board of Chosen Freeholders in April 1975. The Division of Solid Waste Management is now within the Middlesex County Department of Public Safety and Health. The County most recently updated its Solid Waste Management Plan in July 2012.

Recyclable material is residential, commercial, and industrial materials or byproducts that are set aside, handled, packaged, or offered for collection separate from garbage for the purpose of being processed and then returned to the economic mainstream in the form of commodities or products.

Single Stream recycling is a process where the resident/business can mix all recyclable materials in one container; making the task of recycling easy in the home or business.

Recycling benefits include a cleaner environment, healthier people, fewer emissions from landfilling and incineration, less pollution seepage into soils and groundwater, and cost savings.

Solid Waste

Existing Conditions

The Monroe Township Public Works Department is tasked with providing services related to waste disposal. The Township Department of Public Works provides bulk waste pickup services. Bulk waste pickup is held from Spring to Fall, which offers residents a once-a-year bulky waste pickup free of charge.

The Public Works Department performs stormwater management tasks. Stormwater management consists of maintaining and repairing stormwater catch basins and retention/detention ponds. This includes actual infrastructure, fountain maintenance and fence repairs.

Monroe Township operates the Recycling Drop-off center and coordinates curbside recycling with the Middlesex County Improvement Authority (MCIA). The Township works with NJ Clean Communities Council to educate and implement their programs. Nearly all year round, the Township has crews going through the whole town picking up grass bags, leaf bags, yard debris and roadside clean-up.

Middlesex County does not require all waste to be disposed of at the Middlesex County Landfill, allowing any licensed disposal facility to take it. However, all disposal facilities other than the Middlesex County Landfill must file a monthly tonnage report by the 20th of the subsequent month and pay the Solid Waste Management Services fee of \$9.97 per ton. The Middlesex County Landfill cannot accept waste from residential or other vehicles without valid NJDEP permits. The landfill is only open to licensed solid waste haulers. There are several private transfer stations in the County that allow residents to drop off their own waste.

Vegetative Waste

Leaves, grass trimmings, tree trimmings and other vegetative waste differs from other municipal solid waste because they occur seasonally and are collected separately. Vegetative waste can be managed in several ways, including leaf composting (either in the backyard or at leaf composting facilities) or mixed (sometimes called "mulched") into soil devoted to agricultural or horticultural use. According to the New Jersey Statewide Mandatory Source Separation and Recycling Act, leaf composting not occurring in the backyard requires separate leaf collection, imposing additional collection costs to the municipality. Municipalities should encourage backyard leaf composting and promote "Cut It, Leave It" grass

clipping initiatives. The municipality may also attempt to partner with local agricultural land uses in order to make use of vegetative waste for mulching.

Food Waste

In 2015, the US Department of Agriculture (USDA) and the Environmental Protection Agency (EPA) set a goal of reducing food waste by 50 percent by 2030 and New Jersey signed similar legislation in 2017. While a plan has not yet been formalized by the state, the EPA developed a useful tool to help prevent and divert wasted food. Since Monroe includes large generators of garbage, such as restaurants, health clinics, hotels, logistics centers and supermarkets, the Township should look to partner with these institutions to help reduce food waste from heading to landfills.



Recycling

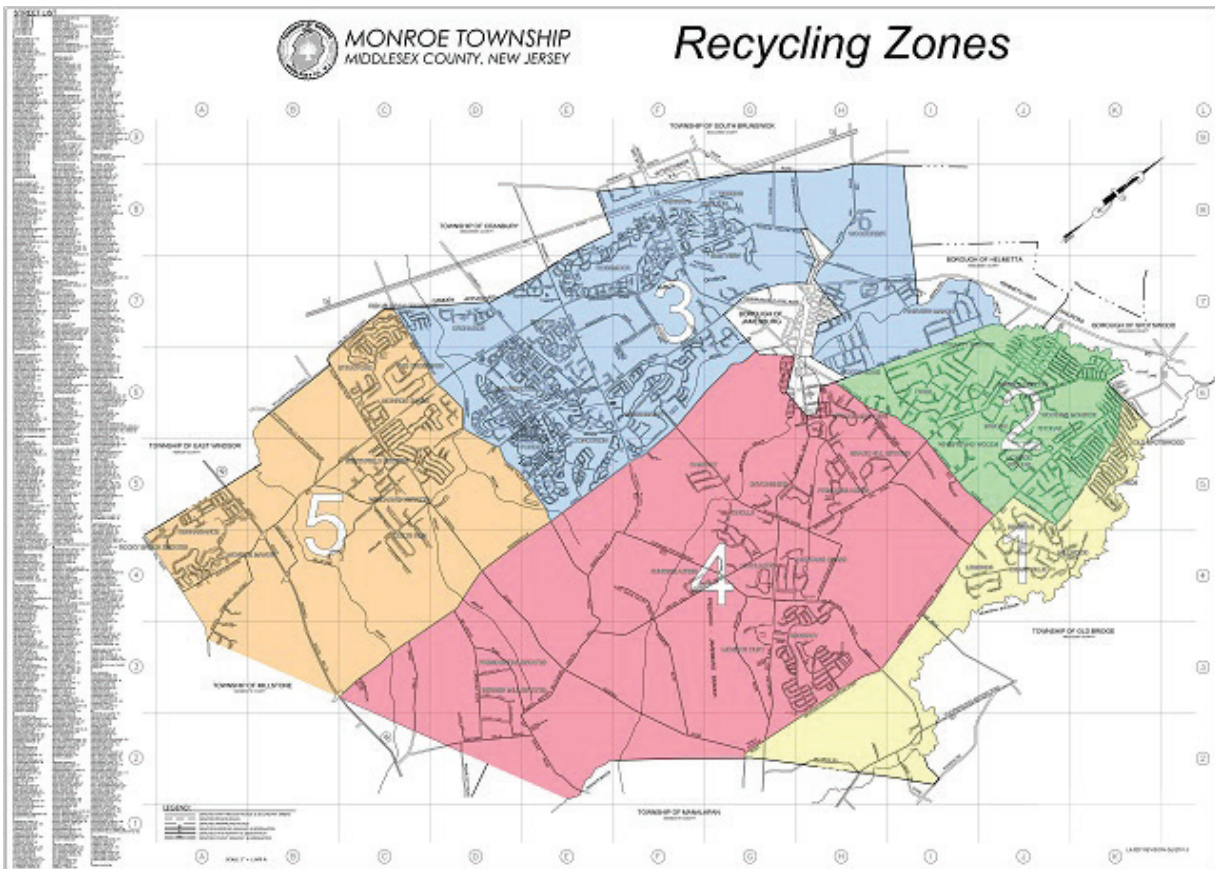
Existing Conditions

Monroe Township contracts with the MCIA for its curbside recycle collection. Curbside recycling collection for the Township occurs every other week. Monroe uses single-stream recycling for its curbside pickup, which means that recyclable materials (bottles, cans, and paper) may be left unsorted by residents. Vegetative waste (yard waste) is also collected at curbside pickup; residents may place their yard waste in a brown bag provided by the Monroe Department of Public Works. Monroe residents may also drop off their recyclable materials at the Department of Public Works Monday through Friday between 8:30 am and 2:45 pm and Saturday between 8:00 am and 11:30 am. Recycling drop-off can accept a wider array of materials compared to curbside including auto batteries, e-waste, white goods/ scrap, antifreeze, motor oil, cooking oil, and paint.

The Township’s recycling schedule divides Monroe into five different zones (as shown in the map above). Curbside recycling collection for the Township occurs every other week on Wednesdays, Thursdays and Fridays depending on the area of the Township that residents live in. Currently, Monroe residents are not required to separate recyclables by material.

In 2018, MCIA collected approximately 14,225 tons of single-stream recyclables in Monroe Township, and recycle rates in Monroe Township are about 69%, significantly above the State’s target goal of a 50% recycling rate. The Township’s high rate of recycling indicates a conscientious dedication by residents to recycle eligible items. The Township Public Works Department also provides multiple educational tools to ensure that residents are informed about all aspects of recycling.

Recycling compliance in Monroe is enforced by the Department of Public Works. The Recycle Coordinator surveys Township streets and investigates businesses and residences when complaints are filed. The County also conducts routine investigations, sharing such results with the Township. When repeat offenders are identified, the Township presumes oversight and enforcement. According to the Township Code, the Recycling Coordinator can enforce recycling laws through the issuance of “Notice of Warnings” and Notice of Violations and Order to Pay Penalties”.



On a global level, how recyclable materials are handled is changing and is resulting with local impacts to municipalities nationwide. China is the largest foreign buyer of U.S. recyclables, but with the country's new "National Sword" policy aimed at cleaning up the nation's environmental problems, China is no longer accepting certain recyclable commodity imports, and accepts recyclable materials with lower limits of contamination or non-recyclable scrap metals. Due to restrictions imposed by China for these recycling commodities, some plastics are no longer accepted in MCIA's curbside program, affecting municipal recycling programs, including the program for Monroe Township. Acceptable plastics now include only those plastic containers coded 1 and 2 in addition to paper, cardboard, aluminum and steel products being permitted recyclable materials.

Best Practices

Compliance

New Jersey became the first state to require that all NJ residents and businesses recycle as per the New Jersey Recycling Act of 1987. The mandatory recyclable items are determined by individual county laws. The Township's codebook addresses recycling in "Chapter 52: Garbage, Rubbish and Refuse" and meets the minimum recycling standards set for residential, commercial and institutional sectors.

Non-residential recycling compliance in Monroe Township is not as great as residential compliance. While the Township requires all nonresidential generators to report once at least every three months to the Municipal Recycling Coordinator, creating a form for nonresidential generators to submit, a Recycle Plan, may help educate and increase compliance with the current law.



Communication & Education

Each year, the Township posts the recycling pamphlet on the Township's website (<https://www.monroetwp.com/index.php/en-us/curbside-recycling-guidelines>) The comprehensive and informative pamphlet outlines vegetative waste, recyclables, and solid waste collection pick-up schedules as well as additional "Do's and Don'ts". The Township also enhances its communication with residents regarding recycling by taking advantage of a free service provided by the State, the Recycle Coach app.

In January 2018, the State of New Jersey licensed with Recycle Coach to centralize recycling information for municipalities and counties in an app for smart devices and computers. The app allows users to input their address to access information such as when to put recyclables and solid waste out for pick-up including regular and holiday collection schedules. It includes articles about becoming better recyclers, a section to ask questions about recycling, quizzes, educational podcasts, and the ability to receive specific communication from the town or county.¹ Free to all municipalities, the Township works with the State to ensure proper application and integration of existing resources. Monroe provides a link to the web version of Recycle Coach on the Township website (<https://app.my-waste.mobi/US/NJ/Monroe?resize>). Residents are able to look up their recycling schedule for their zone, find out what is recyclable, and research other recycling resources.

¹ http://www.nj.gov/dep/newsrel/2018/18_0002.htm

Be Bright, Recycle Right

Paper & Cardboard Aluminum & Steel Plastic/Glass Bottles & Containers

Paper & Cardboard
Office Paper, Paperboard Boxes, Junk Mail, Cardboard, Magazines, Newspaper, Clean Pizza Box Lids, Paper Bags

Aluminum & Steel
Aluminum Cans, Steel Cans

Plastic/Glass Bottles & Containers
Food Bottles & Containers, Drink Bottles, Plastic Jugs, Glass bottles and jars

SAVE SPACE! Empty and flatten all boxes!

KEEP IT CLEAN! All items must be free of food & liquids.

Recycling Questions? Visit MonroeTwp.com or 732-656-4575

Everyone's recycling efforts are appreciated, but we need to **RE-THINK RECYCLING** and make sure we are doing it correctly.

Be Bright, Recycle Right

PLEASE SAVE
this card for future reference

Paper & Cardboard Aluminum & Steel Plastic/Glass Bottles & Containers

DO NOT RECYCLE THE FOLLOWING:

- NO hoses or hangers
- NO food soiled or frozen food boxes
- NO foil items, bulbs, glassware or window glass
- NO plastic bags or wraps
- NO needles
- NO plant pots, trays, lids or cups
- NO shredded paper

Download the FREE **RECYCLE COACH** App and never miss another collection day!

- Receive shredding event notices
- Find out where to recycle TVs
- Check recycling schedule, and more!

NO plastic bags with 3, 4, 5, 6, 7

NO plastic bags in recycling!

Recycling Questions? Visit MonroeTwp.com or 732-656-4575

Recycling Funding Sources

While recycling activities are typically funded through the Township's Operating Budget, other funding sources (i.e. grants, programs) are available.

State Resources

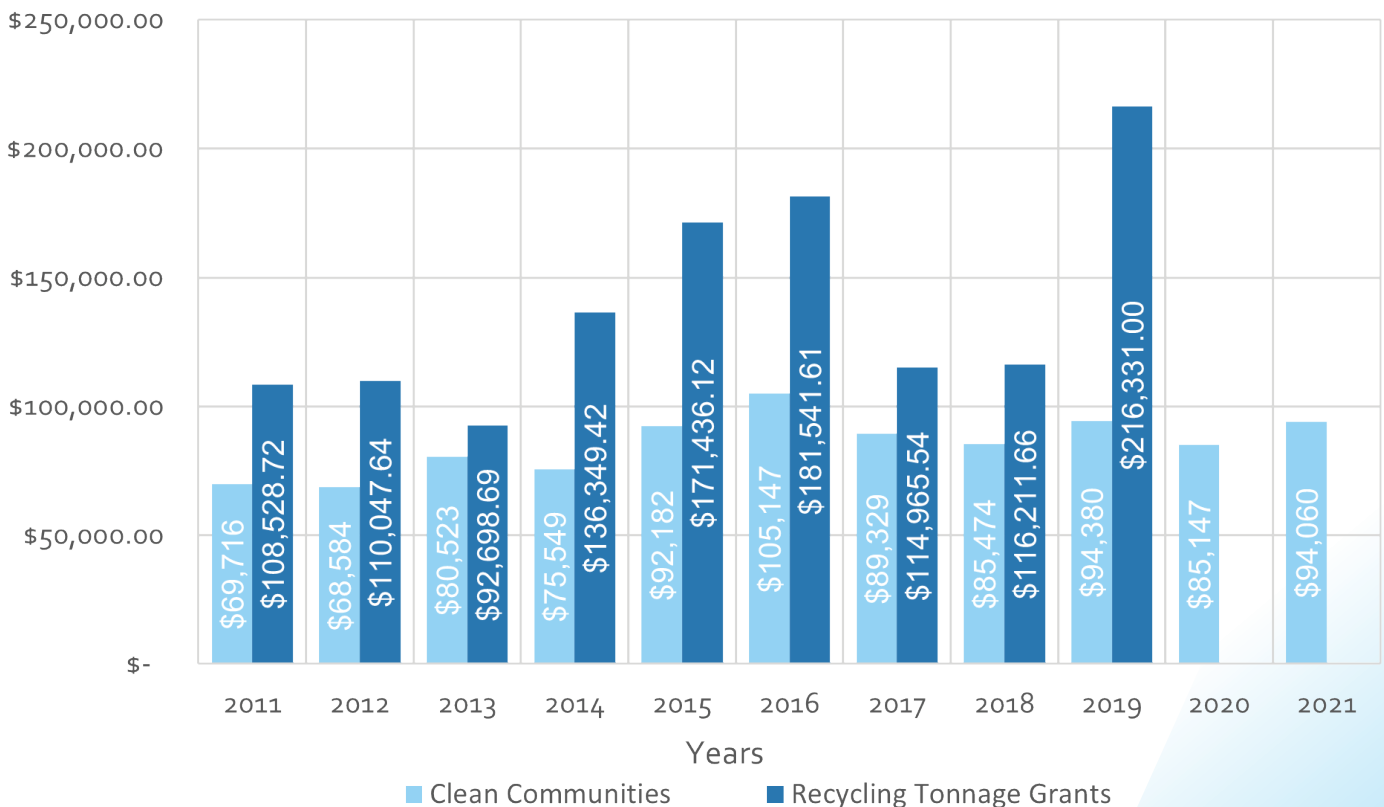
New Jersey Clean Communities

New Jersey Clean Communities is non-profit organization that works closely with NJDEP to administer the Clean Communities program, a litter-abatement program. The program focuses on cleanup, enforcement, and education. Municipalities and counties accepting grant funding should designate a Clean Communities Coordinator, organize volunteer cleanups, adopt and enforce anti-littering ordinances, develop public information and education program, and recycle recyclable litter. In the past, Monroe has used the New Jersey Clean Communities grant to hire additional personnel to clean littered areas in the Township, fund litter abatement. education programs in the local schools, and to purchase litter recovery equipment for the Department of Public Works.

New Jersey Recycling Tonnage Grants

NJDEP provides grants to support municipal recycling programs through the Recycling Tonnage Grant program. To be eligible for funding, a municipality must submit an annual recycling tonnage report by a Certified Recycling Coordinator (CRC). The amount of the grant issued is determined by the amount of materials recycled from the previous calendar year. Funding comes from a \$3 per ton tax on solid waste that is accepted for disposal or transferred at New Jersey Solid Waste facilities. Applications are due by April 30th, and notifications are received by the 2nd quarter following the application submission.

Monroe Township Recycling Grants Received 2011-2021



Recycling Plan Recommendations

Directions

“Check off” a completed Recommendation and mark the year of completion as a way to measure progress.

Short: complete in 1-2 years; **Medium:** complete in 3-5 years; **Long:** complete in 10+ years.

	<i>Recommendation</i>	<i>Implementing Party</i>	<i>Timeframe</i>	<i>Completed</i>	<i>Year Completed</i>
Compliance & Opportunities					
1	Continue to follow State Recycling Plan goals.	Recycling Coordinator	Ongoing		
2	Continue to perform a minimum of three (3) recycling investigations per year mandated by the SWMP and conduct additional enforcement initiatives when necessary.	Recycling Coordinator	Ongoing		
3	Perform an inventory of commercial and institutional establishments and categorize the types of generators and identify targeted recycling opportunities.	Recycling Coordinator	Medium		
4	Create a Recycling Plan form for nonresidential generators to submit annually to the Recycling Coordinator.	Recycling Coordinator	Short		
5	Explore the inclusion of other non-mandated recyclable materials into the Township’s Recycling Ordinance (i.e. Food Waste).	Recycling Coordinator	Medium		
6	Formalize a partnership between the Recycling Coordinator/Health Department and the Police Department for recycling enforcement.	Recycling Coordinator/ Health Department, Police Department	Short		
7	Encourage communication about recycling enforcement between the Township and the County.	Recycling Coordinator, Middlesex County	Short		
Communication & Education					
8	Continue to improve communication about the recycling schedule via the Township’s website, and via the mobile app Recycle Coach, made available for free by the State.	Recycling Coordinator	Ongoing		
9	Establish a method of tracking Recycling Education initiatives.	Recycling Coordinator	Short		
10	Continue to encourage recycling Township-wide through education and recycling events.	Recycling Coordinator/ Environmental Commission	Ongoing		
11	Encourage backyard leaf composting and promote “Cut It, Leave It” grass clipping initiatives.	Recycling Coordinator	Short		
12	Partner with local agricultural land uses in order to make use of vegetative waste for mulching.	Recycling Coordinator	Short		

<i>Recommendation</i>	<i>Implementing Party</i>	<i>Timeframe</i>	<i>Completed</i>	<i>Year Completed</i>
13 Educate residents and landscapers of the detrimental effects that vegetative waste in the sewer system has on the environment and the community.	Recycling Coordinator/ Environmental Commission	Short		
Funding				
14 Continue to pursue grants from the state Recycling Enhancement Act's New Jersey Clean Communities program and support further education and encouragement in the Township.	Recycling Coordinator/ Environmental Commission	Ongoing		
15 Continue to pursue grants from the NJDEP for New Jersey Recycling Tonnage Grants.	Recycling Coordinator	Ongoing		

APPENDICES

Appendix A: Master Plan Survey Summary and Results

Appendix B: Community Workshops Summaries

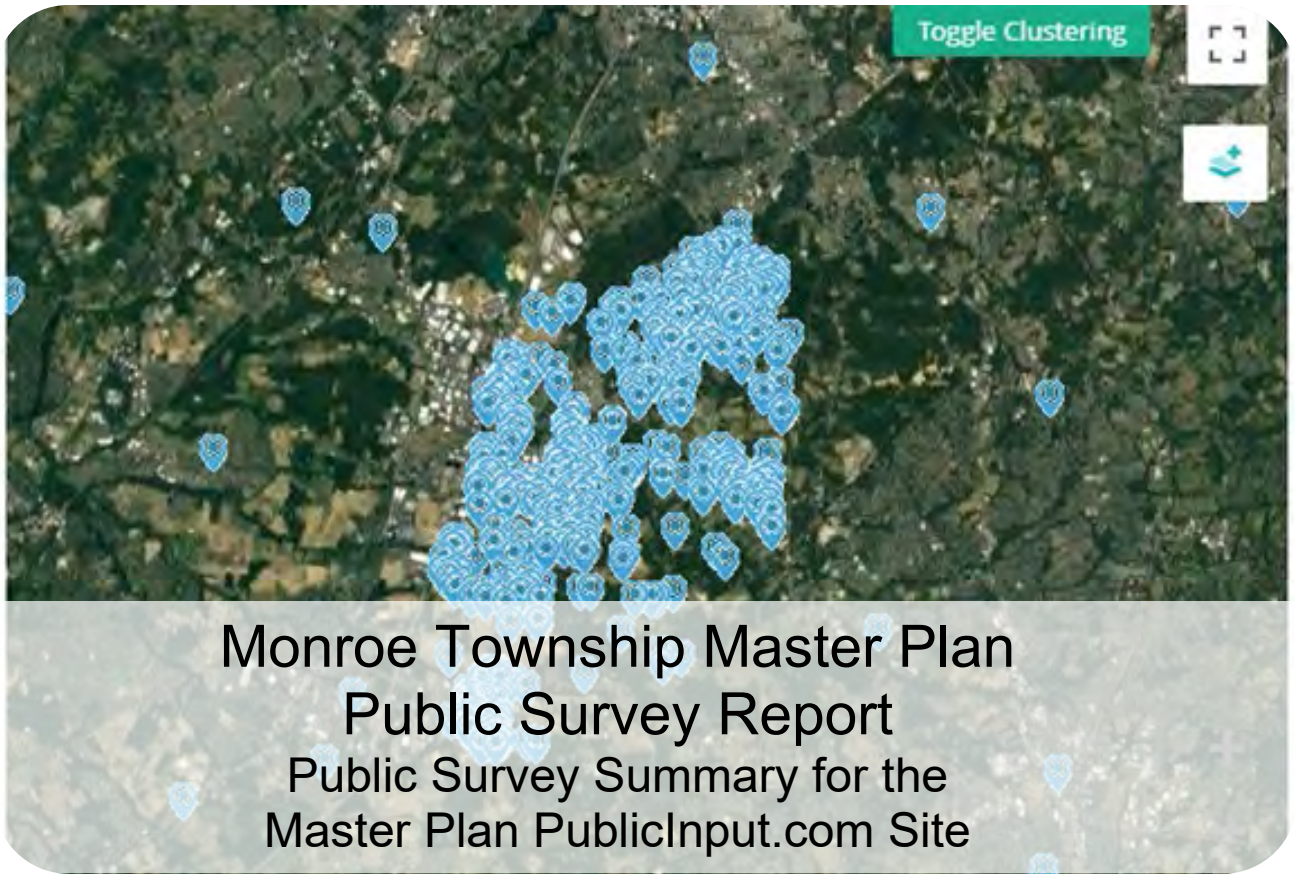
Appendix C: Planning Board Draft Presentation

Appendix D: Build Out Analysis

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Appendix A

Master Plan Survey Summary and Results



Monroe Township Master Plan
Public Survey Report
Public Survey Summary for the
Master Plan PublicInput.com Site

Prepared By:



architects + engineers
practical approach. creative results.

Prepared Date:
August 11, 2021

Community & Public Participation

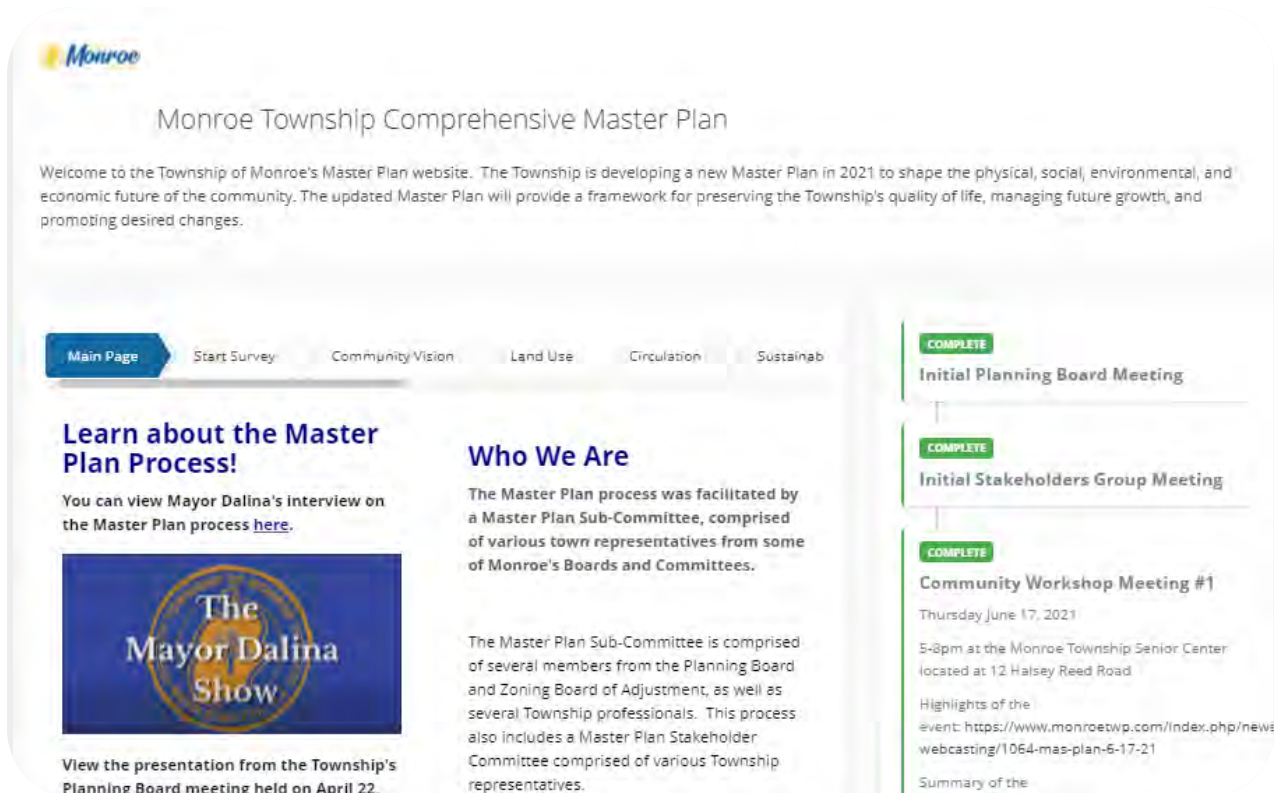
Purpose

This Master Plan Outreach & Circulation Plan Report cannot be written, nor recommendations made without input from the people who live, work, and visit Monroe. Without valuable public input, this document will not accurately represent the wants and needs of Monroe residents. The Master Plan Team is working hard to obtain ideas, opinions, feedback, and concerns from the public throughout the year long Master Plan process using “high touch” to “high tech” approaches, ranging from traditional workshops to online engagement. This collaborative approach provides community insight on the future of Monroe. The goal for the workshop was to engage, preserve, and enhance community outreach communicated by individuals to foster inclusivity and diversity of community assets. The Master Plan aimed to evolve such public engagement to proactively develop strategies for future implementation and development.

Public Input

A Master Plan Subcommittee comprised of Monroe community leaders is helping to guide the Master Plan process. The Master Plan Subcommittee believed input from residents through an online public survey would benefit the outreach effort and help to supplement the feedback from the three community workshops. The website for the survey was <https://publicinput.com/MonroeMP>.

H2M has previously used PublicInput.com to create a promote a public survey to great success. The questions used in the survey were developed by the consulting team with consultation from the Master Plan Sub-Committee and Monroe Township Professionals. The Public Input site was published in May 2021 and promoted by the Township to reach as many residents as possible. There was an off-line component to the Public Input survey that allowed elderly residents with limited access to the internet to be able to call the Township for assistance to take the survey. The survey remained open throughout the summer and will close at the end of August 2021.



The website was also used as a way to directly communicate with Township residents. The H2M team used the website to consistently update residents on future public workshops and gave results and highlight videos of the previous efforts.

The Master Plan website generated significant traffic with 7,572 views through August 11, 2021. There were 1,677 participants for the survey who generated 81,241 responses and 5,236 comments. The results of the survey responses will be discussed further based on the section of the survey where it was asked.

Survey Breakdown

This survey was broken down into different topics generally corresponding to an element of the Master Plan. These topics included (1) **Community Vision** (2) **Land Use**, (3) **Circulation**, (4) **Sustainability**, (5) **Open Space, Parks and Recreation**, and (6) **Public Infrastructure/Utility**. These sections of the survey were created as tabs on the website. Each topic included about 4-7 questions depending on the section. These questions included open ended questions where residents were asked to comment, multiple choice questions where residents were asked to select one or multiple among many other types of questions.

A summary of the results is located in the following sections and a report of all of the questions can be found in the **Appendix** of this report.

1. Community Vision

Issues facing Monroe Ranked:

1. Public Safety
2. Preservation of Farmland
3. Traffic Congestion
4. Quality of Public Education
5. Condition of Parks and Recreation facilities
6. Availability of shopping choices
7. Truck Traffic on residential roads
8. Access to reliable transit
9. Bicycle and pedestrian safety
10. Expansion of residential development
11. Access to jobs/employment
12. State court ordered affordable housing

- When asked what they like most about living in, working in, or visiting Monroe Township they said they liked the rural feel and open space, quiet, and safety.
- Respondents recommended to bring more retail, cafes, and restaurants to Monroe to make it a better place to live. They also would like to see more parks and preserved open space.



The Monroe Township Master Plan Public Survey Report

Public Survey Summary for the Master Plan PublicInput.com Site

2. Land Use

- Preservation of remaining open space and farmland rank as the top land use policies that the Township should pursue.
- A majority of respondents believe that the Township needs additional recreational (62%) and commercial (53%) uses in Monroe with restaurants and community gathering spaces receiving the strongest approvals.
- 63% of respondents felt it was either important or very important that the Township explore the creation of a walkable town center area of Monroe.

3. Circulation

- 72% of respondents thought Monroe should improve biking and walking conditions, 65% thought the Township should improve transportation technology (traffic lights, dynamic message signs), and 62% thought Monroe should increase sidewalk coverage in the Township.
- Two roads were identified as causing concern for both safety and traffic congestion: Applegarth Road, and Route 33.

4. Sustainability

- 70% of survey respondents said they would use hazardous materials and electronics drop off programs. 63% of respondents think Monroe should make additional energy efficiency upgrades to all of its municipal buildings and 61% think there should be increased tree plantings by the Shade Tree Commission.

5. Open Space, Parks, and Recreation

- 38% of respondents reported visiting a park in Monroe at least once a week.
- The main reasons for visiting a park are walking/running (40%), relaxation (20%), and playgrounds/swings (15%).
- The most popular park by far is Thompson Park.
- Many commented that they would like to see more walking trails and bike paths.



The Monroe Township Master Plan Public Survey Report

Public Survey Summary for the Master Plan PublicInput.com Site

6. Public Infrastructure/Utilities

- Respondents stated that the most convenient public facility was the public library, while the DPW hours were not convenient for them.
- 71% of respondents said they wanted to submit permits and pay fees online, 63% said they wanted to report issues and request services online, and 43% said they wanted electric vehicle charging stations.
- 82% of respondents said they want the Township to continue permitting outdoor dining, 55% said they want to continue virtual public meetings
- Respondents' top priorities for capital improvements were road improvements (68%), parks (53%), and sidewalks (43%).



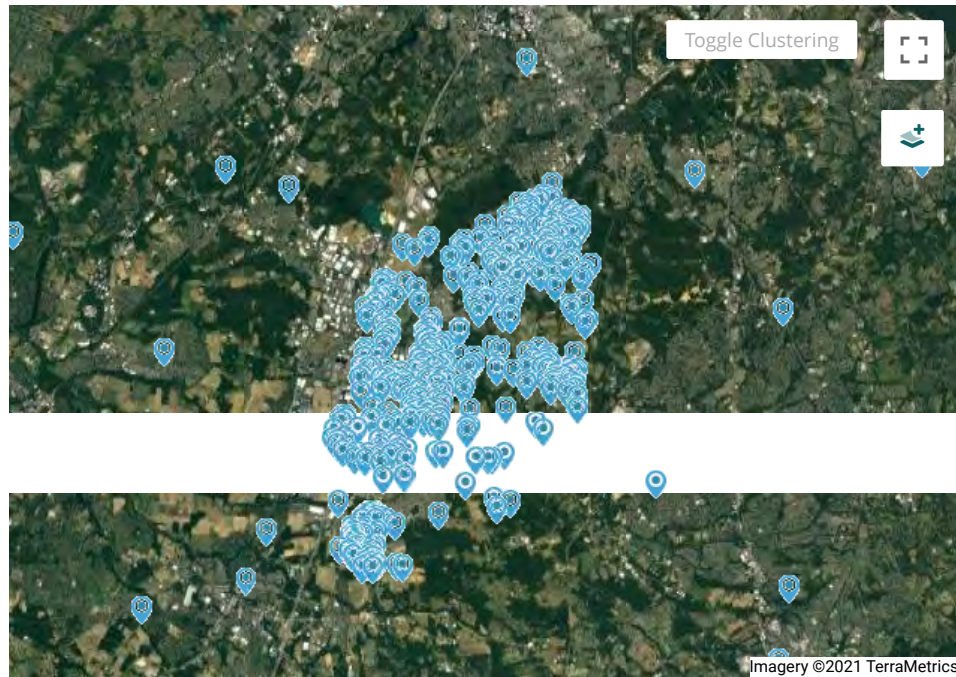
APPENDIX

Monroe Township Comprehensive Master Plan

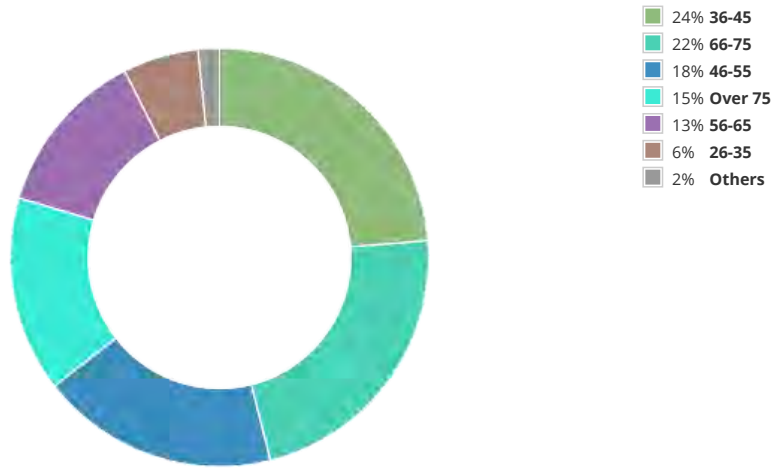
Project Engagement

VIEWS	7,572	PARTICIPANTS	1,677
RESPONSES	81,241	COMMENTS	5,236
SUBSCRIBERS	2		

Where do you live?

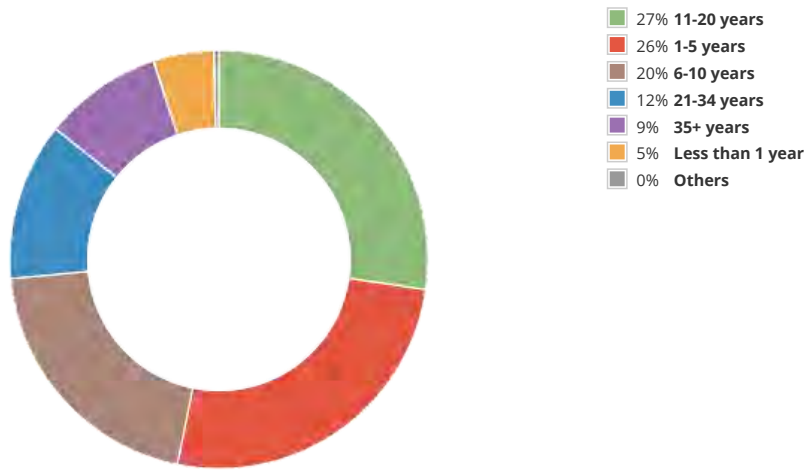


What is your age?



1,573 respondents

How long have you lived in Monroe?



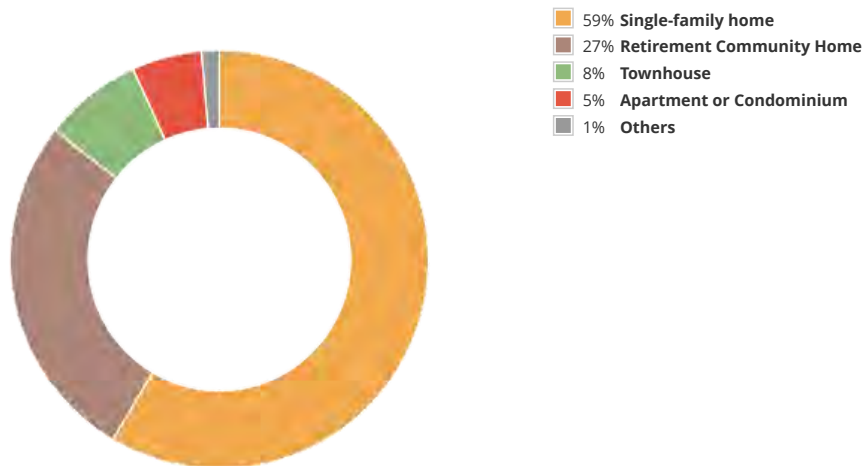
1,557 respondents

If you moved to Monroe within the last 25 years, what were the main reasons you moved here? (Check all that apply)

50%	Quality of life	720 ✓
38%	Found a home I liked for my family	555 ✓
30%	Found a home for retirement	434 ✓
30%	Close to family/friends	428 ✓
29%	Affordability	417 ✓
28%	Quality of school system	408 ✓
28%	Found a neighborhood I liked	405 ✓
21%	Character of community	311 ✓
10%	Close to where I work	142 ✓
10%	Grew up in town or nearby	139 ✓
5%	I have lived in Monroe for over 25 years	74 ✓
4%	Other	53 ✓
3%	I have lived in Monroe my whole life	44 ✓

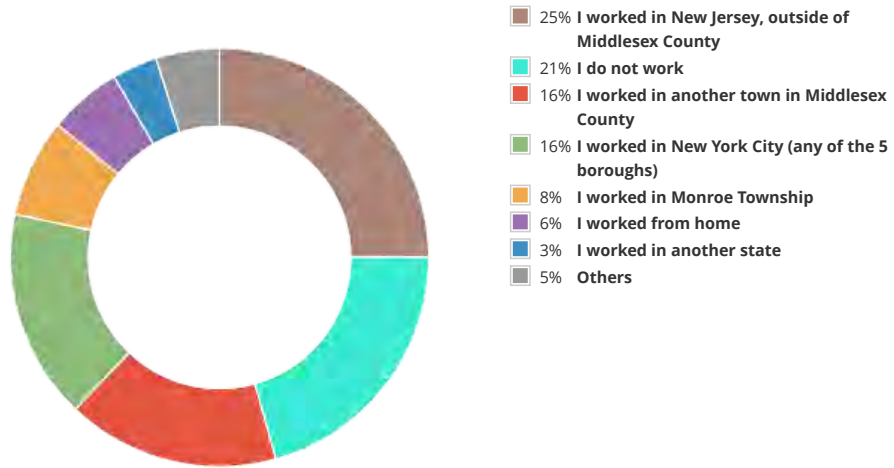
1,450 Respondents

What kind of home do you live in?



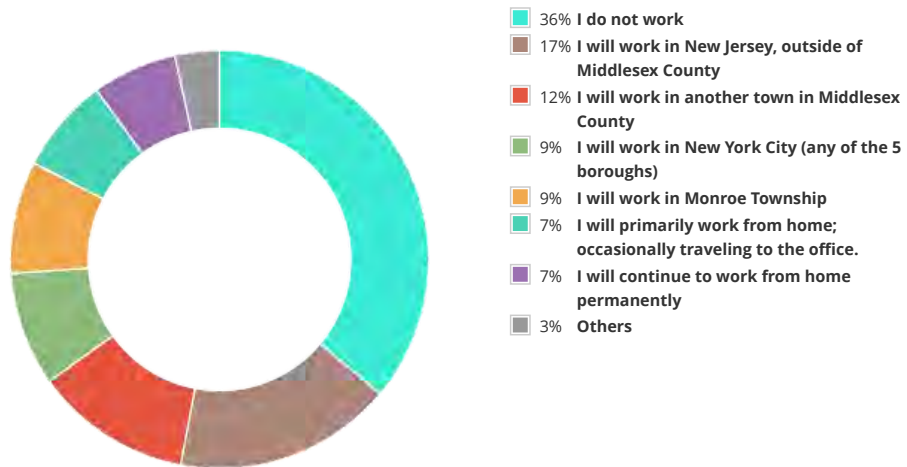
1,535 respondents

Where did you work prior to the pandemic?



1,522 respondents

Where do you expect to work post-pandemic?



1,508 respondents

Rank the importance of the following issues/trends affecting Monroe.

100%	Public Safety	Rank: 4.17	855 ✓
100%	Preservation of farmland	Rank: 4.70	855 ✓
100%	Traffic/Congestion	Rank: 4.86	855 ✓
100%	Quality of Public Education	Rank: 5.15	854 ✓
100%	Condition of Parks and Recreation facilities	Rank: 5.84	855 ✓
100%	Availability of shopping choices (supermarkets, etc.)	Rank: 5.88	855 ✓
100%	Truck traffic on residential roads	Rank: 6.36	855 ✓
100%	Access to reliable transit	Rank: 7.53	854 ✓
100%	Bicycle and Pedestrian Safety	Rank: 7.74	855 ✓
100%	Expansion of residential development	Rank: 7.86	854 ✓
100%	Access to jobs/employment	Rank: 9.39	853 ✓
100%	State Court ordered Affordable Housing	Rank: 9.45	853 ✓
99%	Other	Rank: 12.04	849 ✓

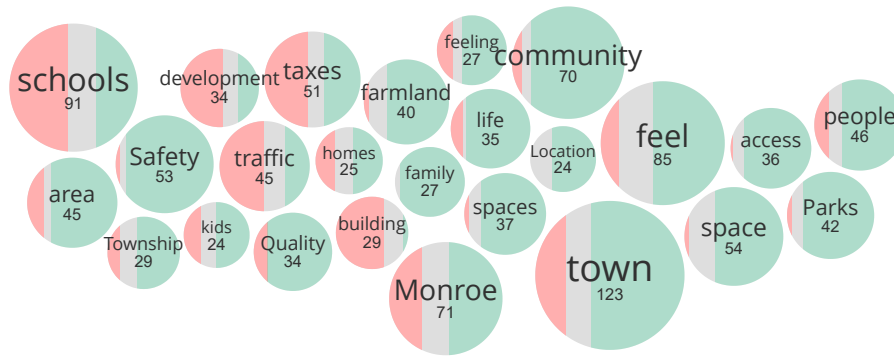
857 Respondents

Rate the following issues/trends affecting Monroe (choose one option per row):

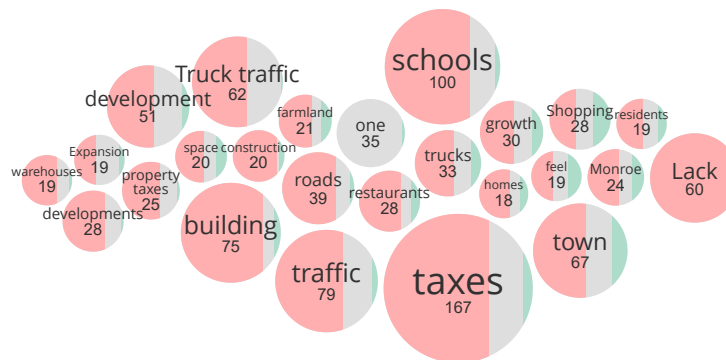
	Very Important	Important	Somewhat Important	Not at all important	Neutral/No opinion
Preservation of farmland	47% Very Important	30% Important	17% Somewhat Important	3% Not at all important	3% Neutral/No opinion
Public Safety	73% Very Important	21% Important	5% Somewhat Important	1% Not at all important	1% Neutral/No opinion
Availability of shopping choices (supermarket, etc.)	31% Very Important	29% Important	27% Somewhat Important	11% Not at all important	1% Neutral/No opinion
Quality of Public Education	56% Very Important	20% Important	13% Somewhat Important	5% Not at all important	5% Neutral/No opinion
State Court ordered Affordable Housing	12% Very Important	14% Important	27% Somewhat Important	35% Not at all important	12% Neutral/No opinion
Traffic/Congestion	51% Very Important	33% Important	13% Somewhat Important	2% Not at all important	1% Neutral/No opinion
Access to reliable transit	23% Very Important	28% Important	29% Somewhat Important	15% Not at all important	5% Neutral/No opinion
Truck traffic on residential roads	44% Very Important	29% Important	20% Somewhat Important	6% Not at all important	2% Neutral/No opinion
Condition of Parks and Recreation facilities	44% Very Important	41% Important	13% Somewhat Important	1% Not at all important	1% Neutral/No opinion
Access to jobs/employment	11% Very Important	23% Important	30% Somewhat Important	22% Not at all important	14% Neutral/No opinion
Expansion of residential development	26% Very Important	14% Important	18% Somewhat Important	34% Not at all important	7% Neutral/No opinion
Bicycle and pedestrian safety	34% Very Important	34% Important	23% Somewhat Important	6% Not at all important	3% Neutral/No opinion

1,310 respondents

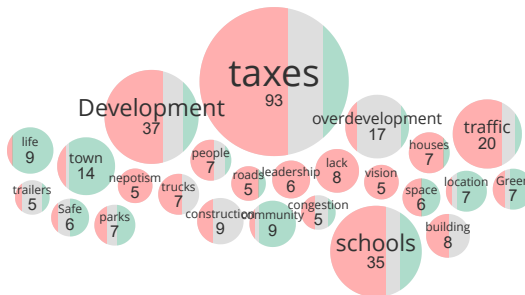
What do you like most about living in, working in, or visiting Monroe Township? (Optional)



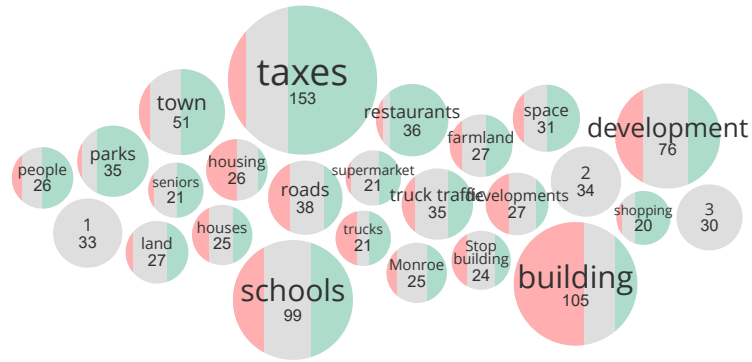
What do you like least about living in, working in, or visiting Monroe Township? (Optional)



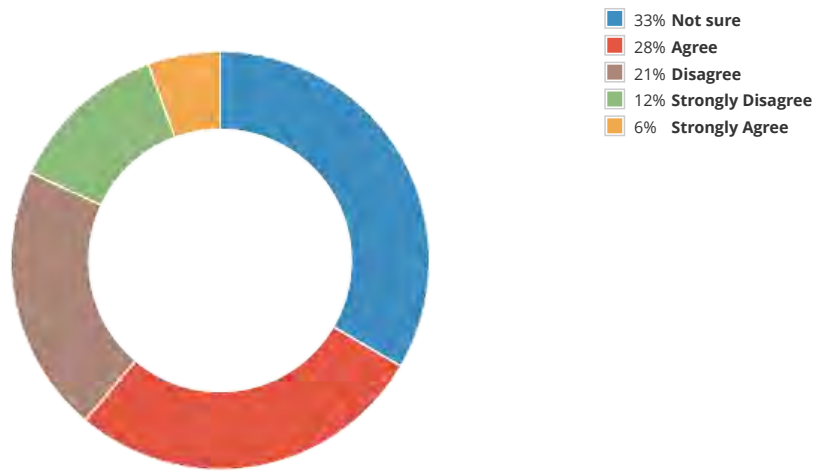
What are 3 words you would use to describe Monroe Township? (Optional)



Please list three ways to make Monroe a better place to live. (Optional)



Please provide your opinion on the following statement: The Township has adequately explained Monroe's obligation to New Jersey's court-ordered affordable housing mandate and its impacts on the Township.



1,161 respondents

Considering that 95% of all new residential construction in Monroe in the next five years will be tied to the Township's obligation to New Jersey's court-ordered affordable housing mandate, rank by priority the land use policies that the Township should pursue.

86%	Preservation of remaining open space	Rank: 2.15	754 ✓
84%	Preservation of remaining farmland	Rank: 2.18	735 ✓
70%	Expanding and improving recreational opportunities	Rank: 3.64	614 ✓
62%	Encourage redevelopment in already built-out areas of the Township	Rank: 4.13	546 ✓
60%	Attract and retain major employers into the Township	Rank: 4.50	522 ✓
59%	Encourage new commercial/retail development on open properties	Rank: 4.51	518 ✓
61%	Expansion of public transit	Rank: 4.79	531 ✓
48%	Encourage new residential development on open properties	Rank: 7.18	421 ✓

874 Respondents

What types of uses do you think the Township needs more of? (Select all that apply)

62%	Recreational	610 ✓
53%	Commercial (Stores, Restaurants, Shops, etc.)	522 ✓
49%	Agricultural	481 ✓
19%	Office	186 ✓
16%	Mixed-Use (Ground floor commercial with upper floor residential)	157 ✓
13%	Industrial (Warehouse, logistic centers, etc.)	129 ✓
8%	Residential	77 ✓
3%	Other	25 ✓

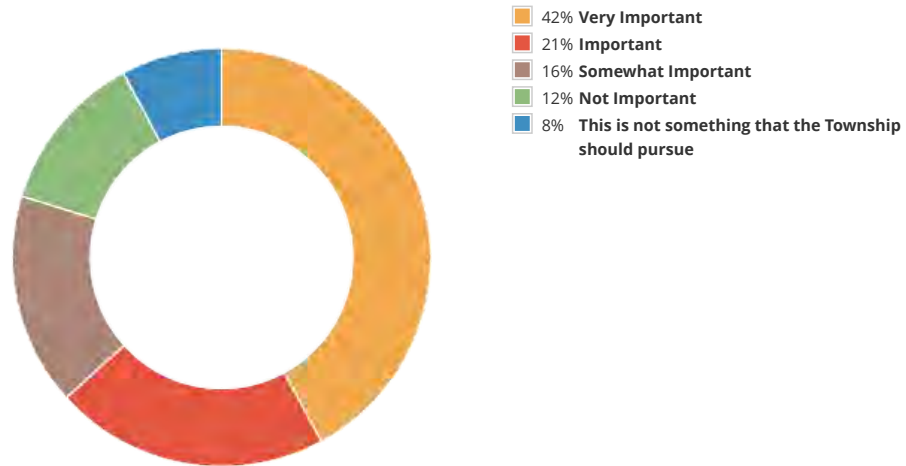
984 Respondents

In your opinion, Monroe could use more: (Select all that apply)

63%	Restaurants	616 ✓
60%	Community gathering spaces	583 ✓
46%	Retail stores	449 ✓
44%	Supermarket	432 ✓
44%	Coffee shops/Cafes	425 ✓
43%	Playgrounds	421 ✓
40%	Cultural facilities	388 ✓
21%	Public artwork	202 ✓
20%	Fitness services	191 ✓
7%	Professional services	73 ✓
6%	Health and beauty services	59 ✓
3%	Other	34 ✓

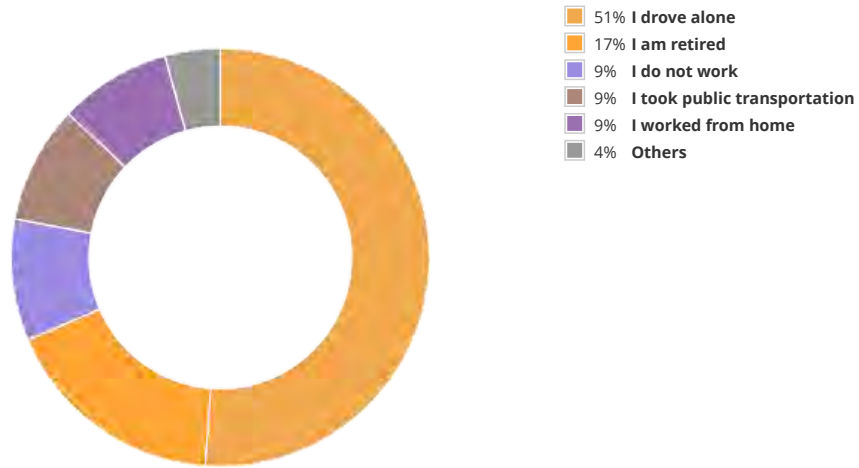
975 Respondents

How important is it to you for the Township to explore the creation a walkable town center area of Monroe?



1,041 respondents

How did you normally travel to work prior to the pandemic?



1,075 respondents

How did you normally travel to other places prior to the pandemic? (school, shopping, entertainment, etc.)

80%	I drive alone	811 ✓
26%	I drive with others	267 ✓
5%	I take public transportation (bus, train)	50 ✓
3%	I walk	26 ✓
2%	Someone else drives me	25 ✓
1%	I use ride-sharing or car-sharing services (Lyft, Uber, Zipcar, etc.)	9 ✓
1%	I prefer not to answer	9 ✓
1%	I bicycle	7 ✓
0%	I use community transportation (Senior bus service, AccessLink, etc.)	5 ✓

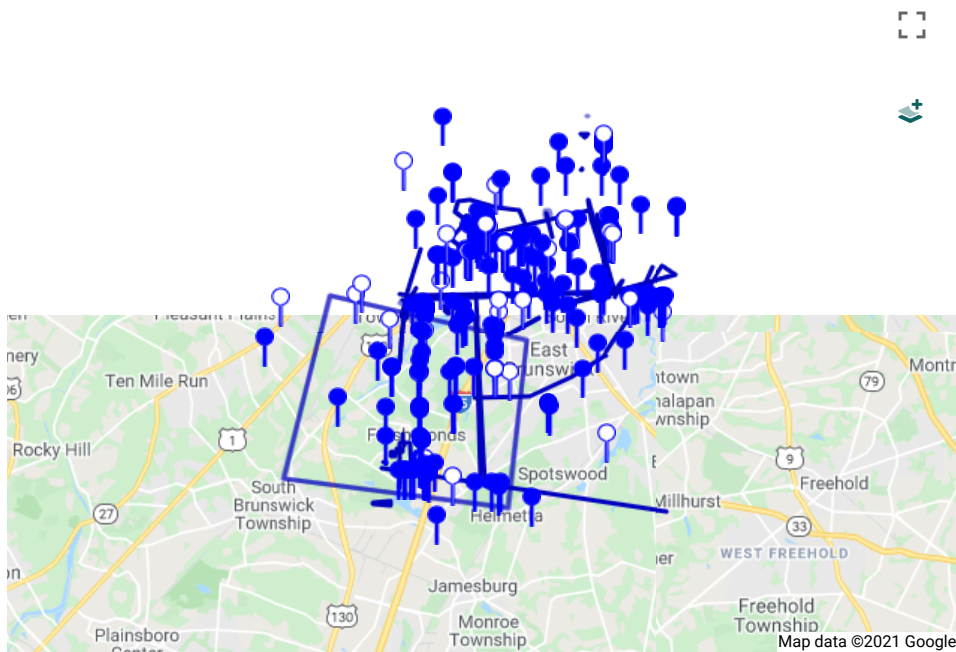
1,015 Respondents

Please select all of the following statements that you think are true pre-pandemic.

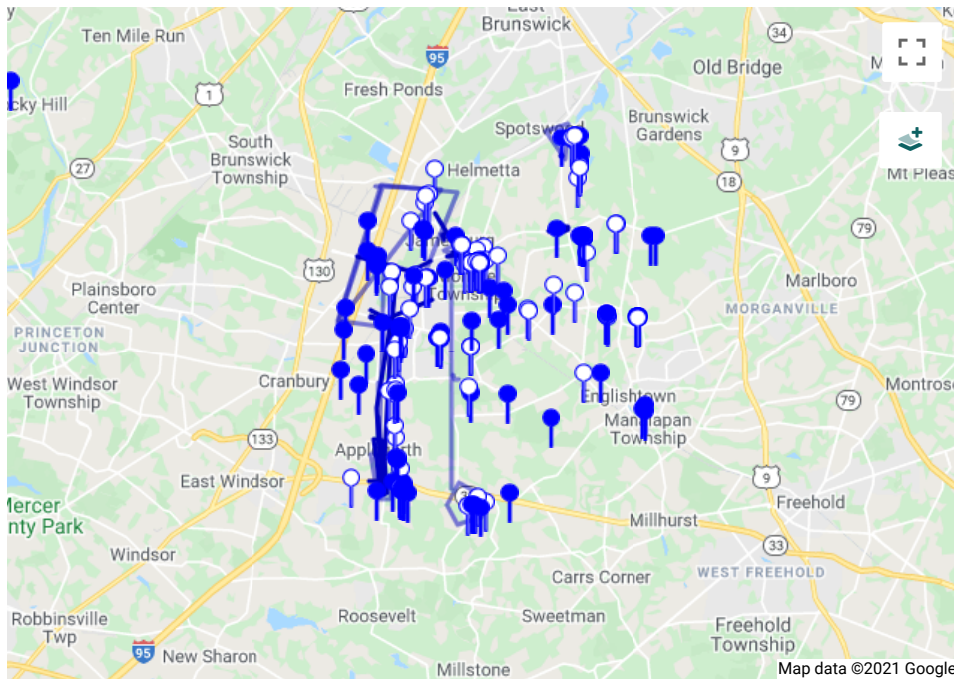
71%	Driving in Monroe is safe and easy	686 ✓
25%	None of the above is true	245 ✓
17%	Walking in Monroe is safe and easy	169 ✓
10%	Taking public transportation is safe and easy	99 ✓
8%	Bicycling in Monroe is safe and easy	80 ✓
3%	Traveling in Monroe as a person with limited mobility is safe and easy	30 ✓

973 Respondents

Please use the "Add Point" feature to provide a pin locator indicating the township intersections or other locations where you feel safety may be a concern and the reason why feel that way.



Please use the "Add Point" feature to provide a pin locator to indicate on the interactive map areas of the Township where there is significant congestion.



Please rank the options provided below for how Monroe should improve mobility throughout the town? (Select all that apply)

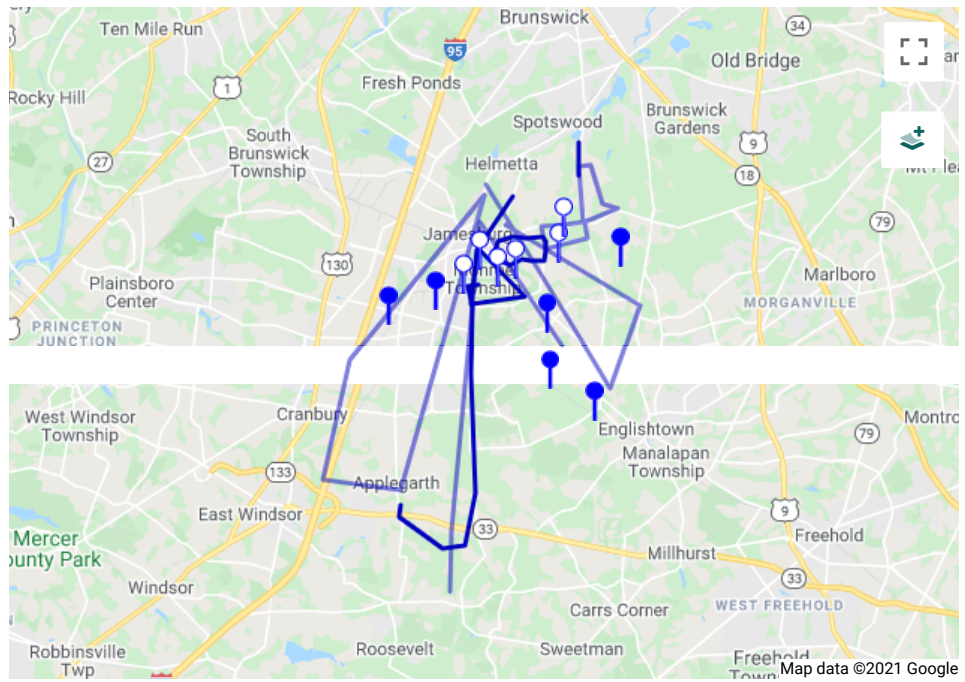
72%	Improve biking and walking conditions	Rank: 2.36	513 ✓
65%	Improve transportation technology (traffic lights, dynamic message signs)	Rank: 2.72	465 ✓
62%	Increase sidewalk coverage in the Township	Rank: 3.01	446 ✓
59%	Add more streetscape amenities (benches, lighting, bike racks, etc.)	Rank: 3.54	422 ✓
50%	Advocate for new bus routes (Comment below where you would like to see this)	Rank: 4.22	358 ✓
50%	Provide wayfinding signage to identify key destinations (parking, municipal buildings, etc.)	Rank: 4.31	356 ✓
46%	Increase accessibility/mobility for people with limited mobility	Rank: 4.86	327 ✓
43%	Pursue partnerships with ride-sharing services (Lyft, Uber, etc.)	Rank: 6.00	306 ✓
18%	Other	Rank: 6.95	130 ✓

716 Respondents

Do you ride a bicycle around Monroe as a means of transportation?



If you answered yes to the previous question, please draw a line on the map indicating your bicycle route.



Select the environmentally friendly programs that you are most likely to use. (Select all that apply)

70%	Hazardous materials drop off	590 ✓
70%	Electronics Drop Off	589 ✓
41%	Freecycle Program (exchange of free items between members)	345 ✓
35%	Request for a shade tree	293 ✓
24%	Use of community shuttle	199 ✓
23%	Attendance at Monroe Green Fair	194 ✓
20%	Participating in the community garden	166 ✓
2%	Other	21 ✓

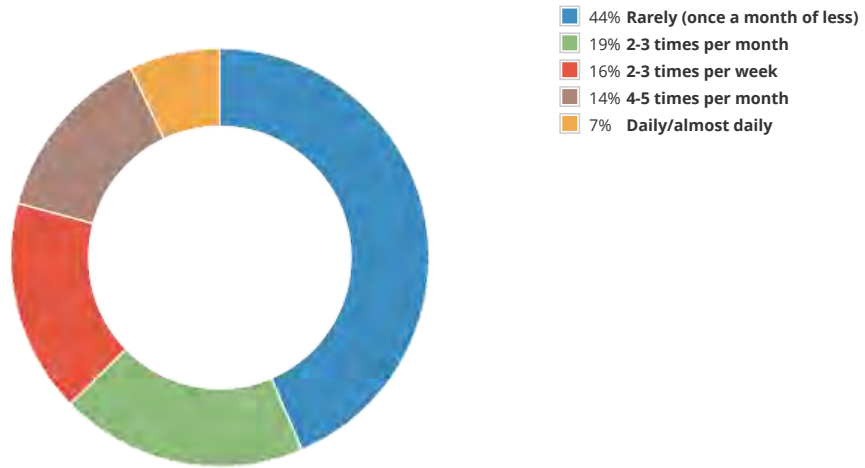
841 Respondents

Which of the following sustainability programs/initiatives should Monroe Township pursue? (Select all that apply)

63%	Making additional energy efficiency upgrades to all of its municipal buildings	543 ✓
61%	Increased tree plantings by Shade Tree Commission	524 ✓
49%	Additional Community Cleanup Events	422 ✓
47%	Installing additional electric vehicle charging stations	404 ✓
39%	Purchasing electric and/or fuel-efficient vehicles	339 ✓
29%	Expansion of the community garden program	247 ✓
25%	More rain barrel sales/information workshops	216 ✓
20%	Additional rain garden education workshops	169 ✓
3%	Other	28 ✓

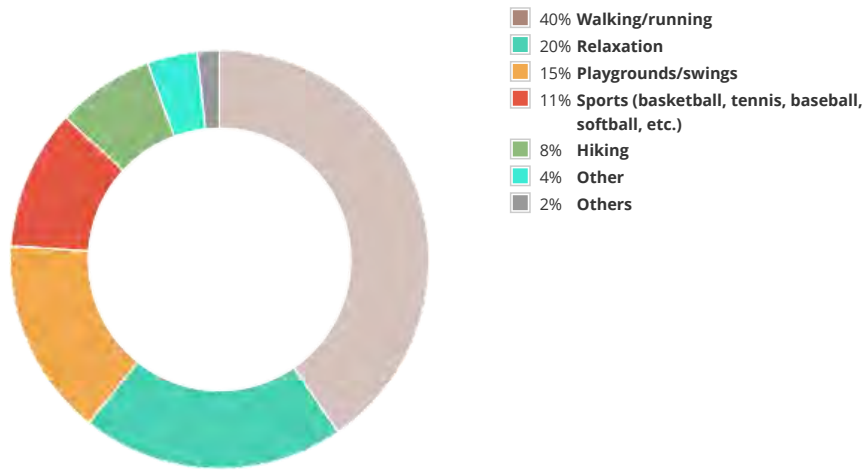
863 Respondents

How often do you go to a park in Monroe?



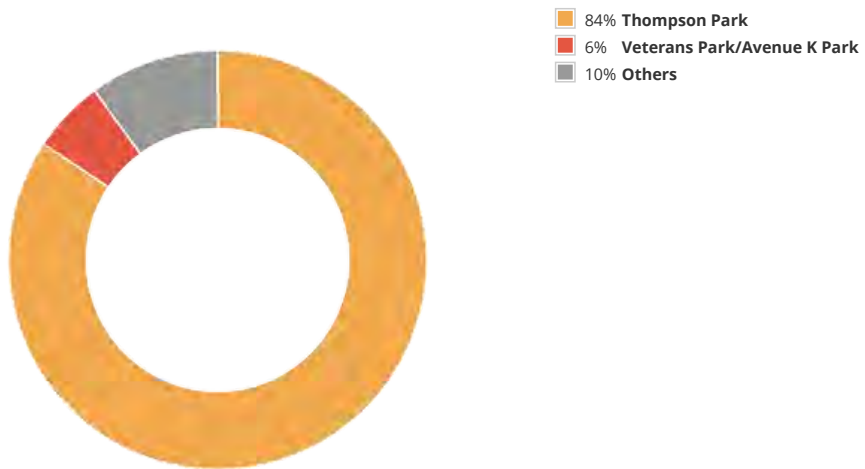
938 respondents

What is the main reason you go to a park?



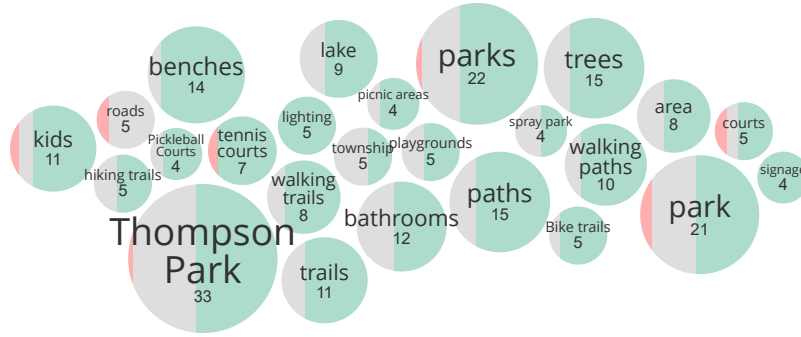
876 respondents

What park do you most often use?

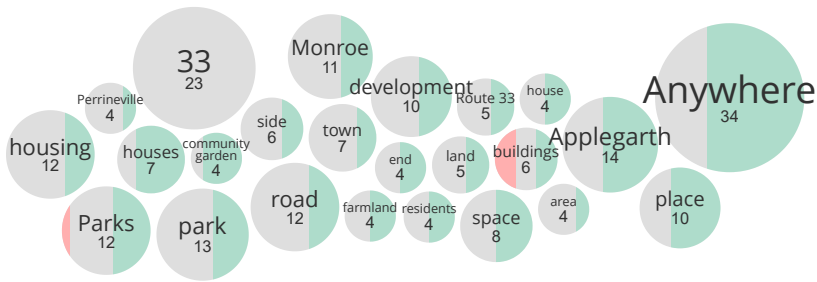


888 respondents

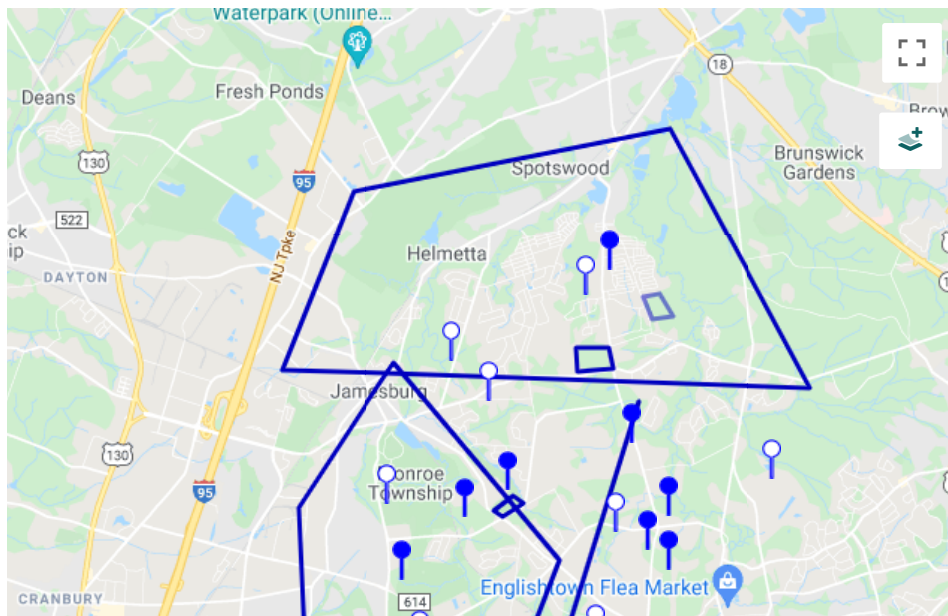
Please list any amenities or upgrades that you would like to see in your local parks and specify which parks need these amenities/upgrades.



Where in the Township would you suggest future park locations?



In the map below, please suggest areas of Monroe where the Township should pursue for open space if you know of any areas.



Map data ©2021 Google

Prior to the pandemic, had you been to the following municipal buildings at least once in 2019? (Select all that apply)

78%	Public Library	658 ✓
43%	Township Hall	358 ✓
42%	DPW Yard	356 ✓
39%	Recreation Center	331 ✓
35%	Senior Center	293 ✓
19%	Police Station	162 ✓
10%	MTUD Offices	86 ✓
6%	Transportation Offices	51 ✓
2%	Other	19 ✓

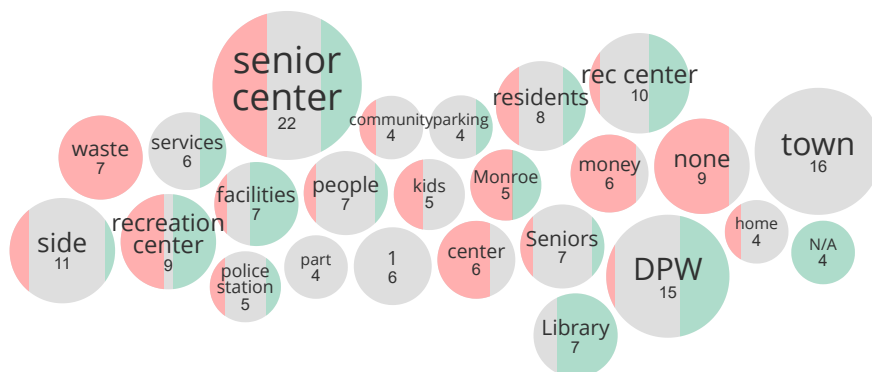
839 Respondents

Prior to the pandemic, how would you rate the convenience of the following facilities?
(choose one option per row)

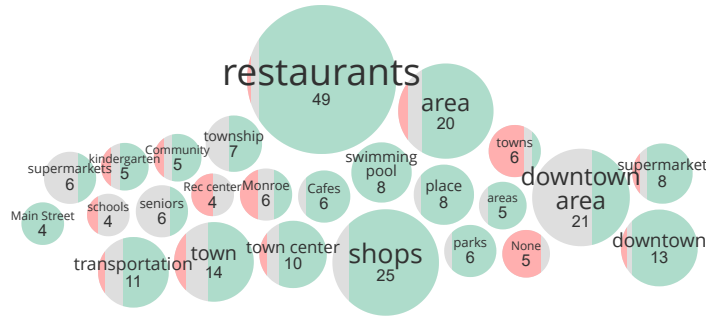
	Very Good	Good	Satisfactory	Neutral/No Opinion	Fair	Poor	Very Poor
Township Hall	32% Very Good	24% Good	14% Satisfactory	27% Neutral/No Opinion	1% Fair	1% Poor	1% Very Poor
Public Library	61% Very Good	23% Good	7% Satisfactory	7% Neutral/No Opinion	1% Fair	1% Poor	- Very Poor
Police Station	31% Very Good	24% Good	11% Satisfactory	30% Neutral/No Opinion	1% Fair	1% Poor	1% Very Poor
Senior Center	35% Very Good	17% Good	7% Satisfactory	36% Neutral/No Opinion	2% Fair	2% Poor	1% Very Poor
Recreation Center	24% Very Good	21% Good	15% Satisfactory	30% Neutral/No Opinion	4% Fair	4% Poor	2% Very Poor
DPW Yard	23% Very Good	27% Good	16% Satisfactory	29% Neutral/No Opinion	3% Fair	1% Poor	1% Very Poor
MTUD Offices	12% Very Good	15% Good	12% Satisfactory	57% Neutral/No Opinion	2% Fair	1% Poor	1% Very Poor
Transportation Offices	10% Very Good	9% Good	8% Satisfactory	67% Neutral/No Opinion	2% Fair	1% Poor	2% Very Poor
Other. Please comment below	4% Very Good	7% Good	3% Satisfactory	83% Neutral/No Opinion	1% Fair	1% Poor	2% Very Poor

778 respondents

Please provide any suggestions you may have for improving your experience at these facilities.



What amenities or services would you like to see provided by the Township that are not currently available?

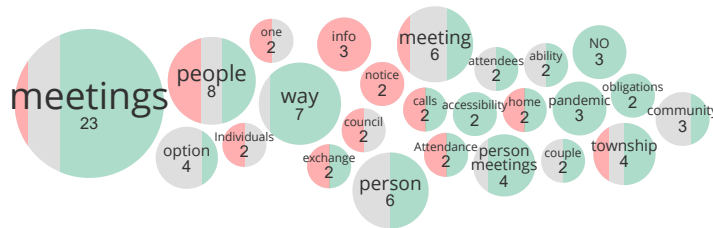


What additional technology services would you like to see Monroe Township implement? (Select all that apply)

71%	Submit permits and pay fees online	420 ✓
63%	Report issues and request services through online form	376 ✓
43%	Electric vehicle charging stations	257 ✓
22%	Advanced technology for parking	129 ✓
16%	Bike share	94 ✓
2%	Other	13 ✓

595 Respondents

Have you attended any virtual public meeting since the transition to virtual meetings began? If so, what has been your perception of them?



What initiative(s) that the Township undertook during the pandemic would you like to see continue into the future? (Select all that apply)

82%	Permitting outdoor dining	550 ✓
55%	Virtual public meetings	366 ✓
2%	Other	14 ✓

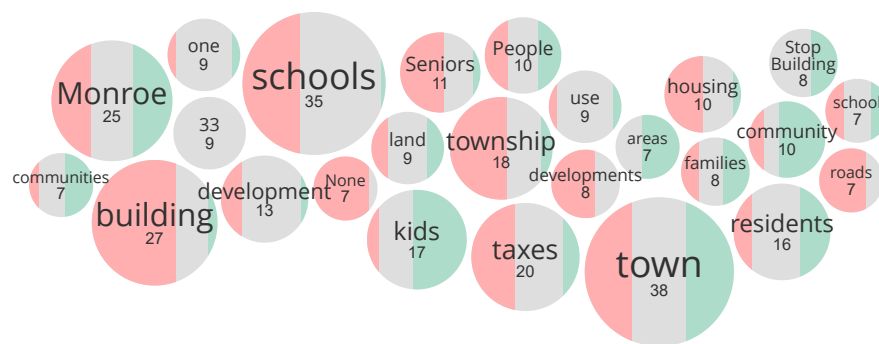
669 Respondents

What capital improvements should Township governing bodies prioritize? (Select all that apply)

69%	Road improvements	554 ✓
53%	Parks	425 ✓
49%	Sidewalks	395 ✓
42%	School buildings	338 ✓
31%	Bike Trails	249 ✓
24%	Water and sewer	196 ✓
9%	Parking	69 ✓
2%	Other	16 ✓

801 Respondents

Please provide any additional comments on issues in the Township that have not been covered by the survey.



Appendix B

Community Workshop Summaries



Prepared By:



architects + engineers
practical approach. creative results.

Workshop Date:
June 17, 2021

Prepared Date:
June 21, 2021



Community & Public Participation

Purpose

This Master Plan Outreach & Circulation Plan Report cannot be written, nor recommendations made without input from the people who live, work, and visit Monroe. Without valuable public input, this document will not accurately represent the wants and needs of Monroe residents. The Master Plan Team is working hard to obtain ideas, opinions, feedback, and concerns from the public throughout the year long Master Plan process using “high touch” to “high tech” approaches, ranging from traditional workshops to online engagement. This collaborative approach provides community insight on the future of Monroe. The goal for the workshop was to engage, preserve, and enhance community outreach communicated by individuals to foster inclusivity and diversity of community assets. The Master Plan aimed to evolve such public engagement to proactively develop strategies for future implementation and development.

Community Workshops

A Master Plan Subcommittee comprised of Monroe community leaders is helping to guide the Master Plan process. The Master Plan Subcommittee believed input from several active Town organizations separate from public workshops would benefit the Master Plan Reexamination process. The Town of Monroe and the Master Plan Team worked with Community Stakeholders, the Planning Board, Open Space Committee, and the Environmental Commission planned six community workshops, four to occur in the beginning of the process to gather information and two additional meetings at the end to provide a “feedback loop” for residents.

The first public Community Workshop was held on Thursday June 17, 2021 from 5pm to 8pm in the evening at the Monroe Senior Center. Approximately 40 people attended the event.

The Master Plan Team and Monroe Township are hosting several public Community Workshops in the month ahead to continue outreach efforts. These events include:

- Wednesday, June 30, 5-8pm: Township Recreation Center
- July workshop date: TDB; Location: Monroe Township Public Library

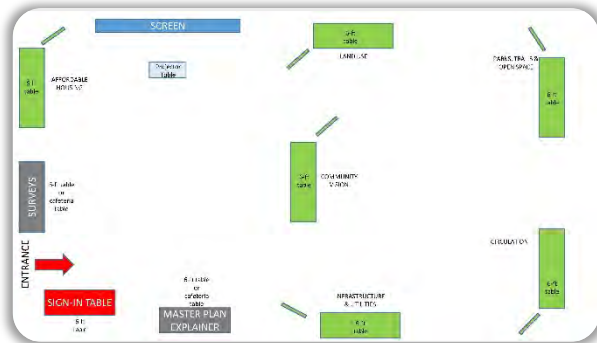


The Town of Monroe Master Plan Outreach & Circulation Plan Report
Community & Public Participation Summary for the June 17th Monroe Community Workshop



The workshop was spearheaded by Sanyogita Chavan of H2M Associates, the Planning Manager/Advisor preparing the Master Plan Report and head organizer of the event. Ryan Conklin, Project Manager, and Paul Cancilla, Staff Planner, were also in attendance.

Upon sign-in, participants were given a Master Plan flyer and an orientation/room layout handout for the night's activities. While waiting to sign-in participants were asked to indicate their desire for attendance to the workshop. Participants were then directed by team members to begin exploring topic tables located throughout the room.



Above: Room layout; Right: Master Plan Reexam Flyer



PLAN HOUSES MASTER PLAN OPEN HOUSE

Residents can choose township locations on Thursday, June 17, 2021, to visit one of three different days to give us their thoughts about the following areas:

- Utilities
- Infrastructure
- Economic development
- Municipal use zoning
- Transportation improvements
- Transit

THURSDAY, JUNE 17, 2021:
Stop by any time between 5-8 pm at the Monroe Township Senior Center located at 12 Halsey Road Road

WEDNESDAY, JUNE 30, 2021:
Stop by any time between 5-8 pm at the Monroe Township Recreation Center located at 100 Monmouth Road

ONE ADDITIONAL DATE AT THE MONROE TOWNSHIP LIBRARY TO BE DETERMINED.



The Town of Monroe Master Plan Outreach & Circulation Plan Report Community & Public Participation Summary for the June 17th Monroe Community Workshop



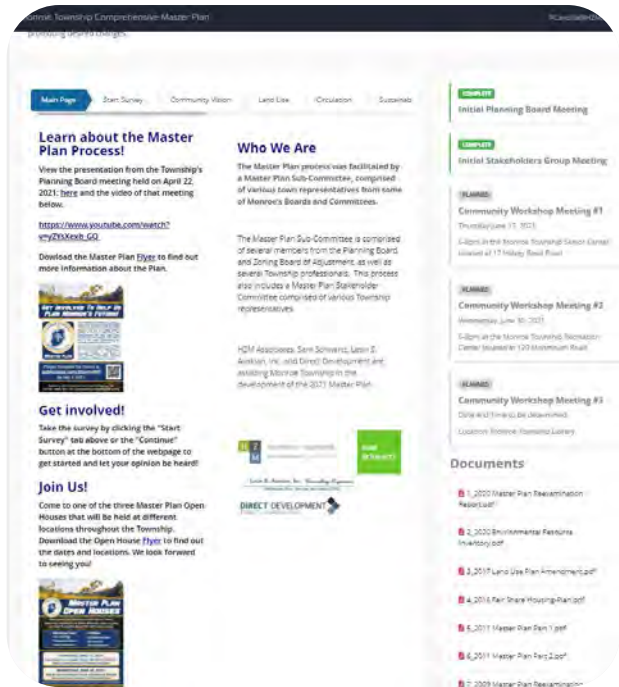
The Master Plan Report and the purposes of the night’s workshop were the following:

1. To gain an understanding of Monroe community issues through the eyes of residents.
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Attendees were notified upon signing in to the workshop of the public survey website, <https://publicinput.com/MonroeMP> and were encouraged to take the online survey in their free time. It was also pointed out that the workshop included a survey table with iPads for online survey taking.

Interactive Portion

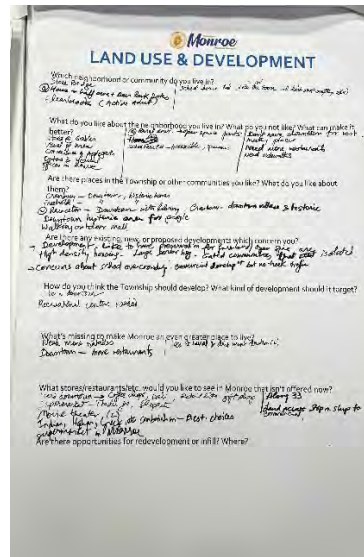
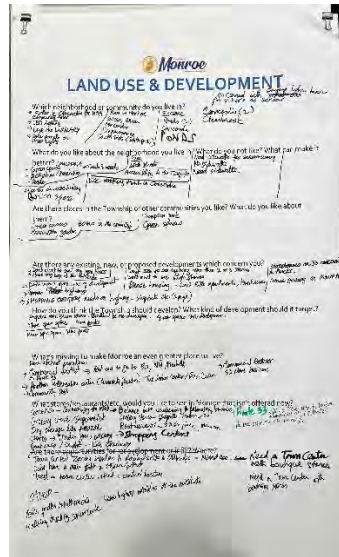
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The Town of Monroe Master Plan Outreach & Circulation Plan Report Community & Public Participation Summary for the June 17th Monroe Community Workshop

1. Land Use



Land Use concerns include:

Residential Concerns

- Negative effects of density – Dense housing within the community causes a lack of open, green space
- Housing developments becoming too tall, desire to keep building scale at 1-story (20 ft.) or 2-story (26 ft.)
- Desire for brick, stone, and vinyl to be main building materials
- Senior and Veterans Housing
- Desire to create more detached single family residential types, and garden apartments
- Recreation center for citizens
- Desire for more amenities and activities for citizens to partake in
- More sidewalks for accessibility
- Lack of community facilities
- Need for a town center
- Accessibility to turnpike and interstate highways
- Accessibility to more internet providers

Commercial Concerns

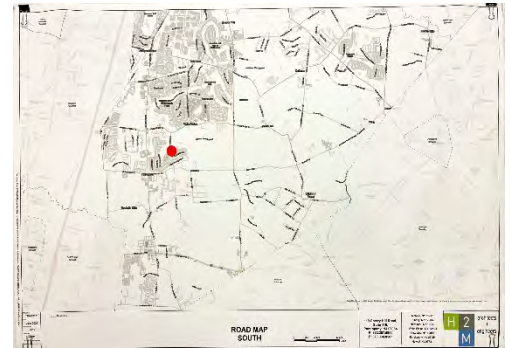
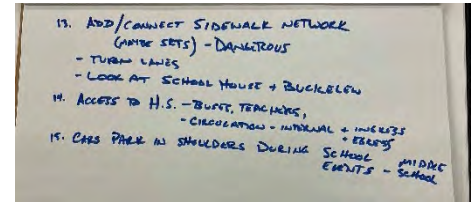
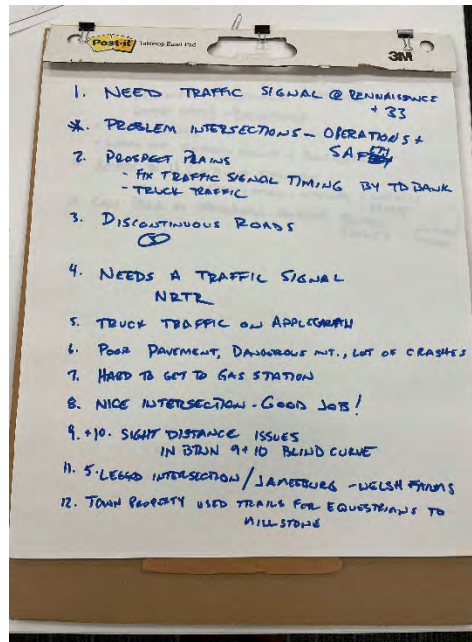
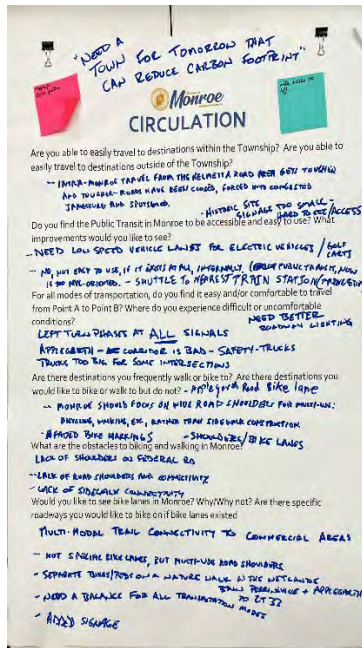
- Lack of a commercial district
- Balance between warehousing and local businesses
- Create shopping centers and business district
- More coffee shops and gathering places
- Introduce boutiques and quaint shops
- Different grocery stores, such as Trader Joe's, ShopRite, etc. for individuals to choose from
- Desire for accessibility to diverse ethnic restaurants and cuisine

“Green” Concerns

- Acquire and utilize maximum amount of open, green space by implementing: community gardens, bike paths, and walking trails
- Increase in ponds and water amenities
- Implement solar panels on street



2. Circulation



Circulation concerns include:

Vehicle Needs

- Roadway maintenance needed – Repave all major and central roads
- Discontinuous roads
- Left turn phases at all signals
- Traffic signal timing leading to collisions
- Sight distance and blind curve issues exacerbated by road discrepancies
- Designated turn lanes
- Introduction of parking deck
- Helmetta Road Area increasingly difficult to travel through, leading to congestion and heavy traffic into Jamesburg and Spotswood
- Implementation of wide road shoulders for safety purposes

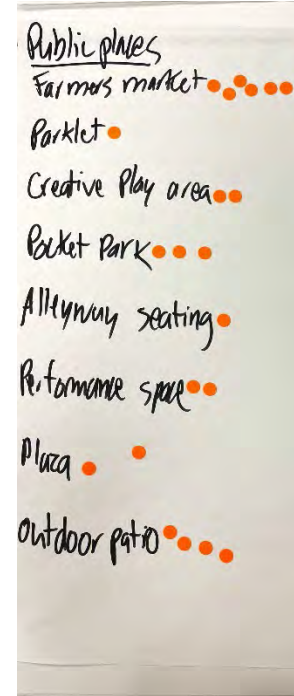
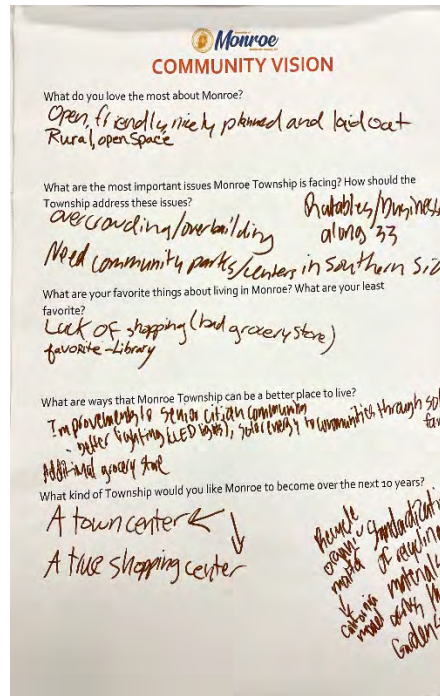
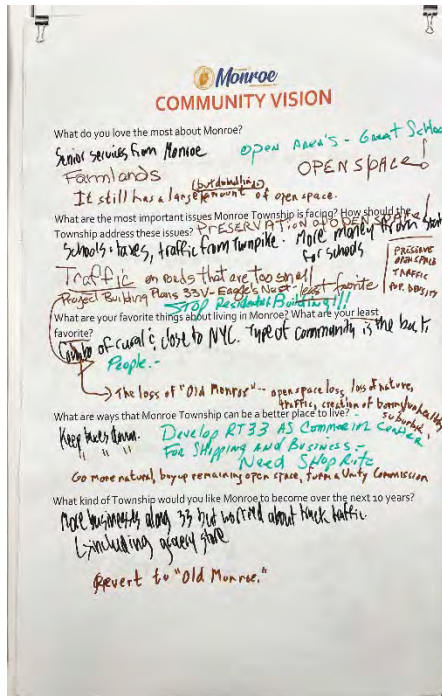
- Improved roadway lighting and streetlights
- Hard to get to a gas station
- Need traffic signal at Renaissance and Route 33

Bike & Pedestrian Needs

- Improved sidewalks and markings of bike lanes
- Create comprehensive sidewalk network
- Designate areas for bike and pedestrian lanes separate from transportation vehicles
- Greater circulation and transportation network for areas near schools
- Introduce designated parking during school events
- Separate bike and pedestrian lane from vehicles between Perrineville and Applegarth to Route 33
- Bike racks



3. Community Vision



Community Vision concerns include:

Loss of “Old Monroe”

- Creation of unhealthy suburbia
- Loss of open space and nature – key rural elements to the town’s appeal
- Desire to preserve farmlands and remaining open space

Growth concerns

- Increasing tax burden on residents
- Income diversity
- Desire for schools to receive more funding from the state
- Overcrowding of students within schools and residents within respective communities
- Overbuilding tall developments – desire for zoning code enforcement
- Need community centers and parks
- Better shopping centers and grocery stores

Environmental and Sustainability concerns

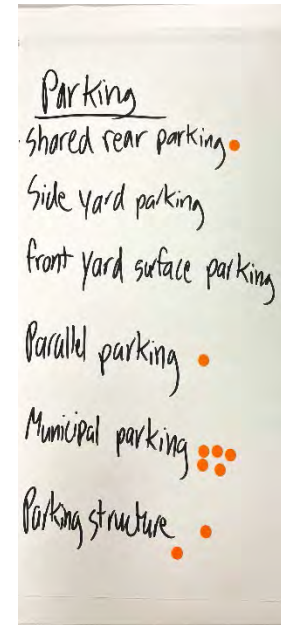
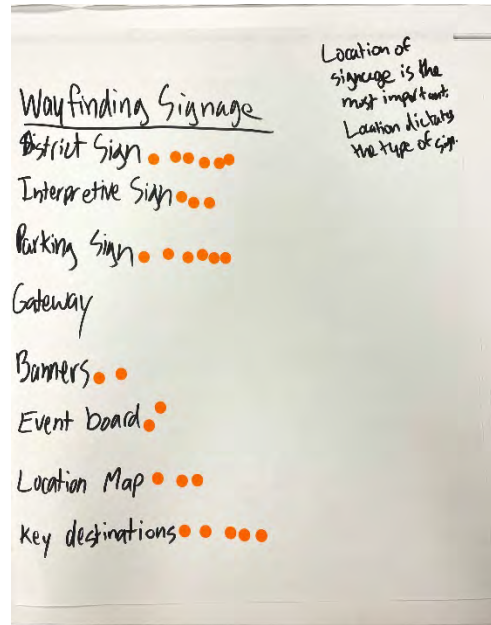
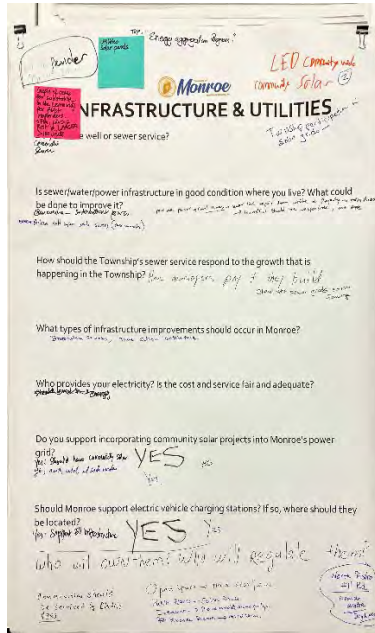
- Become a sustainable town – renewable energy from solar and air sources
- Enhanced tree ordinance
- Greater tree lining along streets
- Replace aging infrastructure with sustainable building resources
- Develop a recycling center and implement a composting system

Desire for More Amenities and Activities

- Create farmer’s market, outdoor patios, and pocket parks
- Street festivals, seasonal art, places with music for individuals to enjoy
- Sit-down, traditional restaurants
- Retail and grocery stores
- Coffee shops
- Fitness facilities
- Theater and Historic Designation Downtown



4. Infrastructure & Utilities



Infrastructure and Utilities concerns include:

Implement “Energy Aggregation Program”

- Municipality purchases bulk of energy on behalf of residents to reduce average price
- Community wide implementation of LEDs and solar power grids
- Provide electric vehicle charging stations to encourage use of renewable energy vehicles

Internet and Safety Concerns

- Allow more providers from different companies to grant internet access to residents
- Municipality should repair sewer lines and grids, not responsibility of individual

- Provide safe and clean water to all residents
- Diminish current excessive pesticide use

Emergency Responder Areas

- Designate few acres for community responder stations – fire, police officers, EMT

Parking Concerns

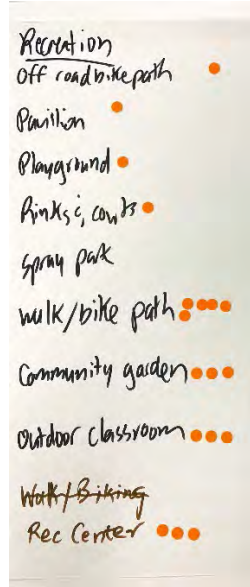
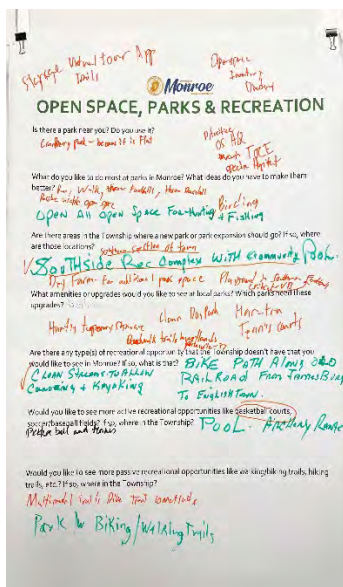
- Create parking structures for greater accessibility
- Implement parallel, shared rear, and municipal parking throughout town

Wayfinding Signage

- Implement signage throughout town for greater accessibility
- Key destinations, district signs, parking signs, location maps, interpretative signs



5. Parks, Trails & Open Space



Parks, Trails & Open Space concerns include:

Increase in Recreational Amenities

- Walking and bike path
- Off road bike path
- Pavilions
- Playgrounds and spray parks
- Community garden
- Recreational center
- Outdoor classroom
- Skating rinks
- Tennis, basketball, volleyball courts
- Community pools

Utilize Open Space in Southside

- Southern section of Monroe key area for land preservation
- Create recreational complex with pool
- Develop Senior Parks for activities



The Town of Monroe Master Plan Outreach & Circulation Plan Report

Community & Public Participation Summary for the June 30th Monroe Community Workshop



Prepared By:



architects + engineers
practical approach. creative results.

Workshop Date:
June 30, 2021

Prepared Date:
July 6, 2021



Community & Public Participation

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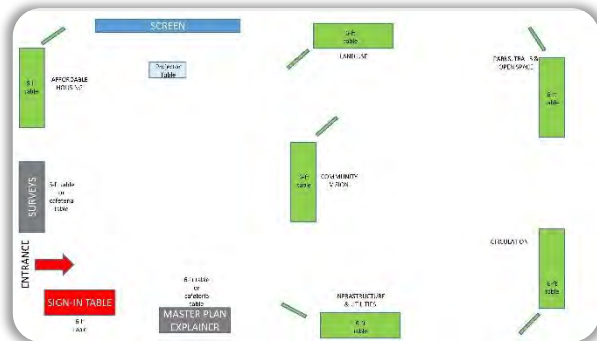


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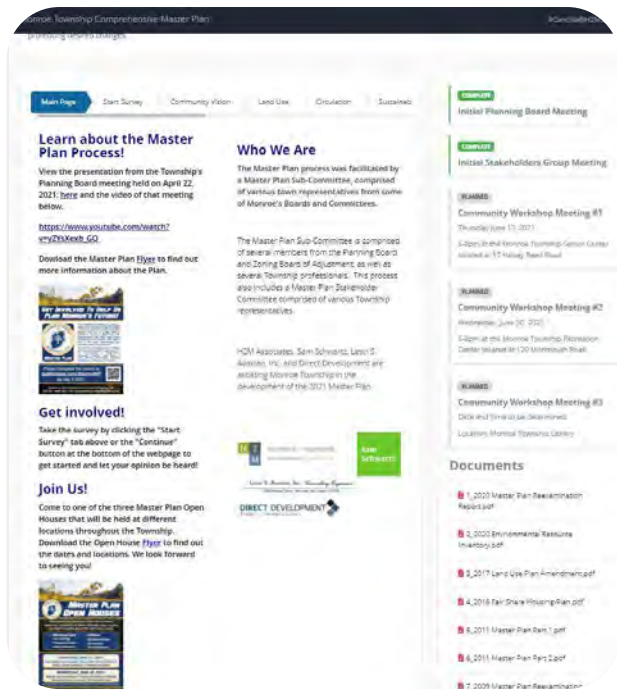
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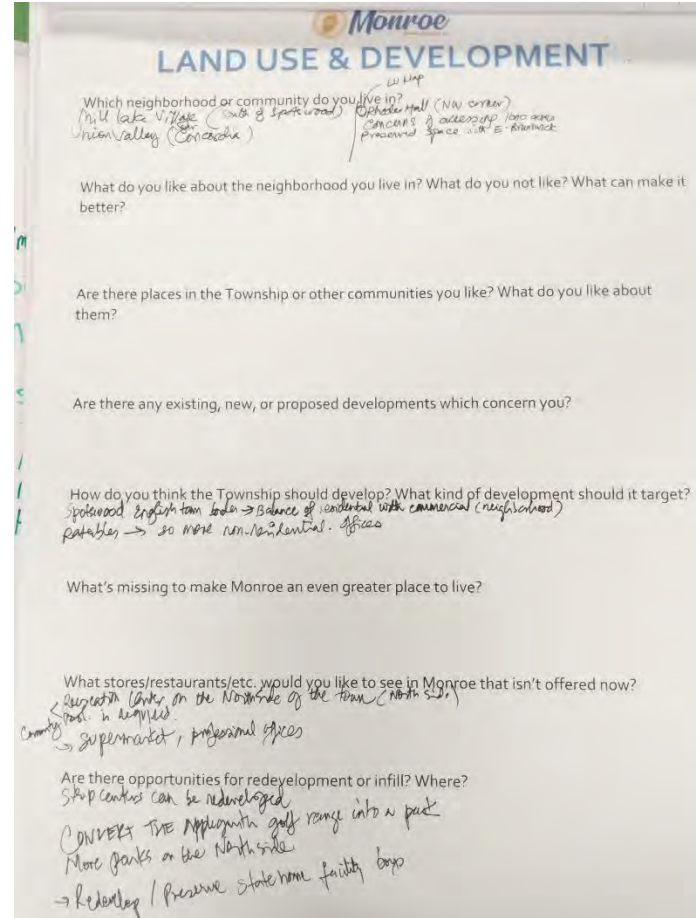
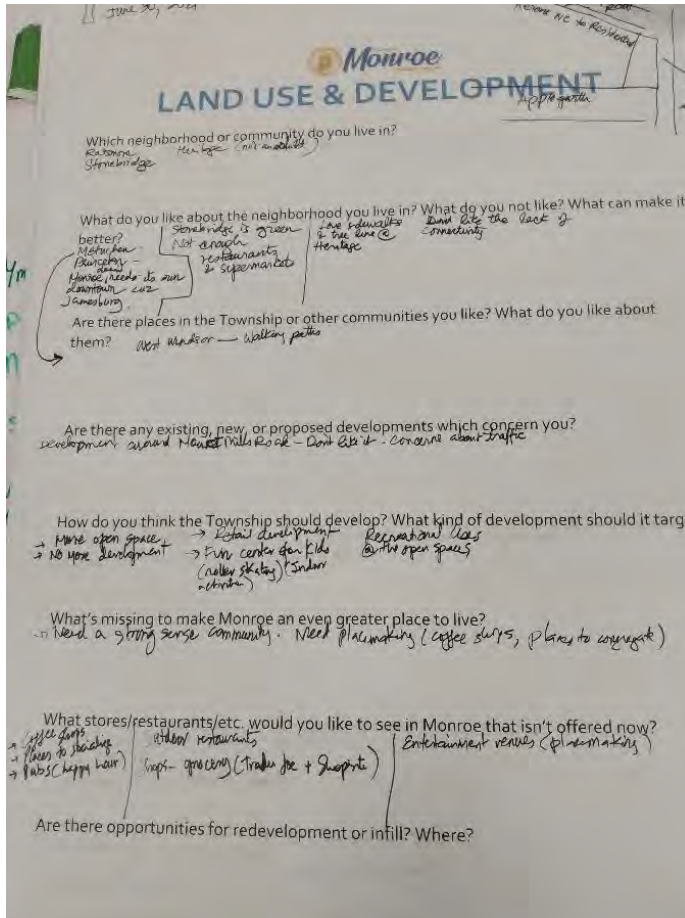




The Town of Monroe Master Plan Outreach & Circulation Plan Report

Community & Public Participation Summary for the June 30th Monroe Community Workshop

1. Land Use



Land Use concerns include:

Residential Concerns

- Sidewalks and tree line
- Walking Paths
- Traffic associated with new developments
- Congregation spaces
- Balance between residential and commercial

Commercial Concerns

- Not enough restaurants and supermarkets
- Needs its own downtown
- Needs more retail development
- Fun center for kids (roller skating, indoor activities)
- Coffee shops

- Places to socialize
- Pubs
- Grocery shops (Trader Joe's and Shoprite)
- Outdoor restaurants
- Entertainment venues
- Ratables, so more non-residential offices

“Green” Concerns

- More open space
- Recreational uses at the open spaces
- Preserved space
- Recreation center and park needed on north side



2. Circulation

(4) Mont Mills / Englishtown Road - need signal
522 - Bottleneck - enough

Monroe CIRCULATION

Are you able to easily travel to destinations within the Township? Are you able to easily travel to destinations outside of the Township?

! Access to shops from neighborhoods only accessible by car, not walkable

Do you find the Public Transit in Monroe to be accessible and easy to use? What improvements would you like to see?

*Public Transit should be improved to be more accessible to all parts of town
* - provide more routes - should share routes to Monroe buses*

For all modes of transportation, do you find it easy and/or comfortable to travel from Point A to Point B? Where do you experience difficult or uncomfortable conditions?

*Walking to schools -> safe route to school
Connectivity to schools*

Are there destinations you frequently walk or bike to? Are there destinations you would like to bike or walk to but do not?

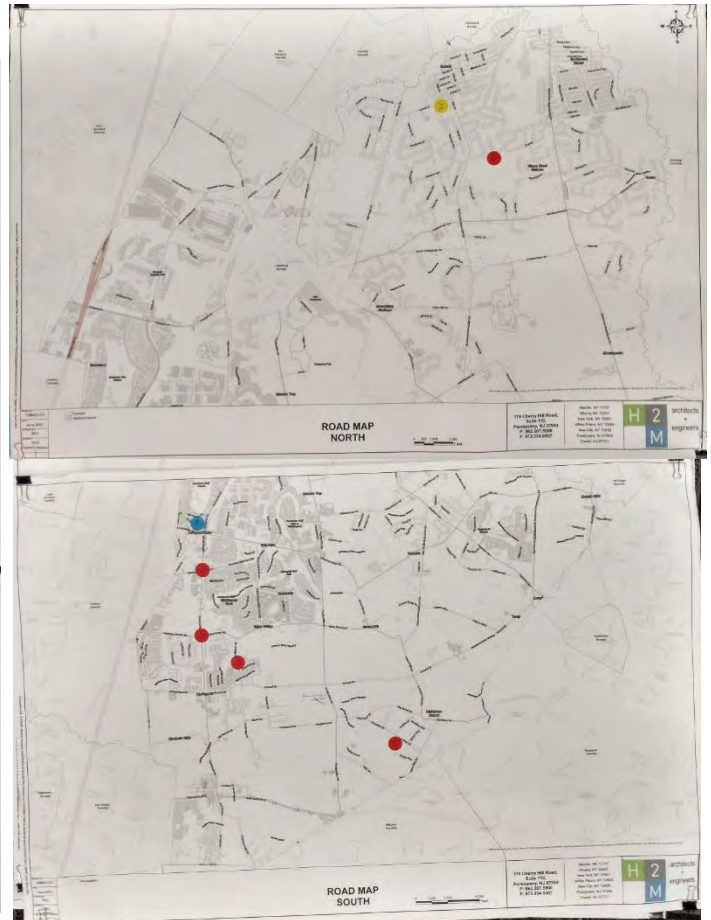
*But, Mont Mills - less accessible because of large development
& by trail*

What are the obstacles to biking and walking in Monroe?

Dedicated trails - on Mt. trails!

Would you like to see bike lanes in Monroe? Why/Why not? Are there specific roadways you would like to bike on if bike lanes existed?

*New Developments frontage need bike lanes
Public prop frontage add bike lanes in town & RCR*



Circulation concerns include:

Vehicle Needs

- Bottleneck on 522
- Mont Mills/Englishtown Road needs signal
- Left turn phasing at intersections
- New developments hamper rural area access
- Roads not wide enough
- Increase ROW
- Shops and neighborhoods only accessible by car

Bike & Pedestrian Needs

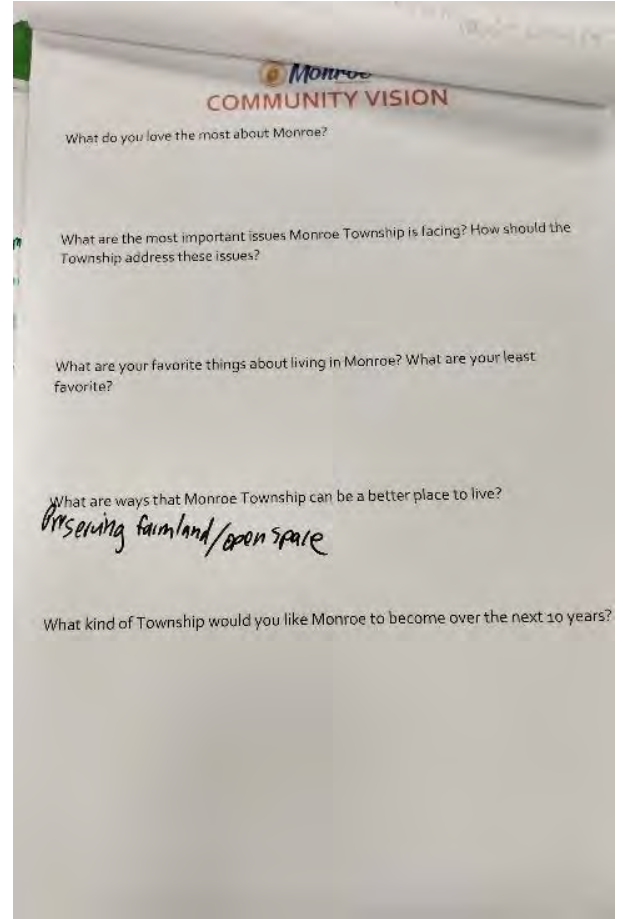
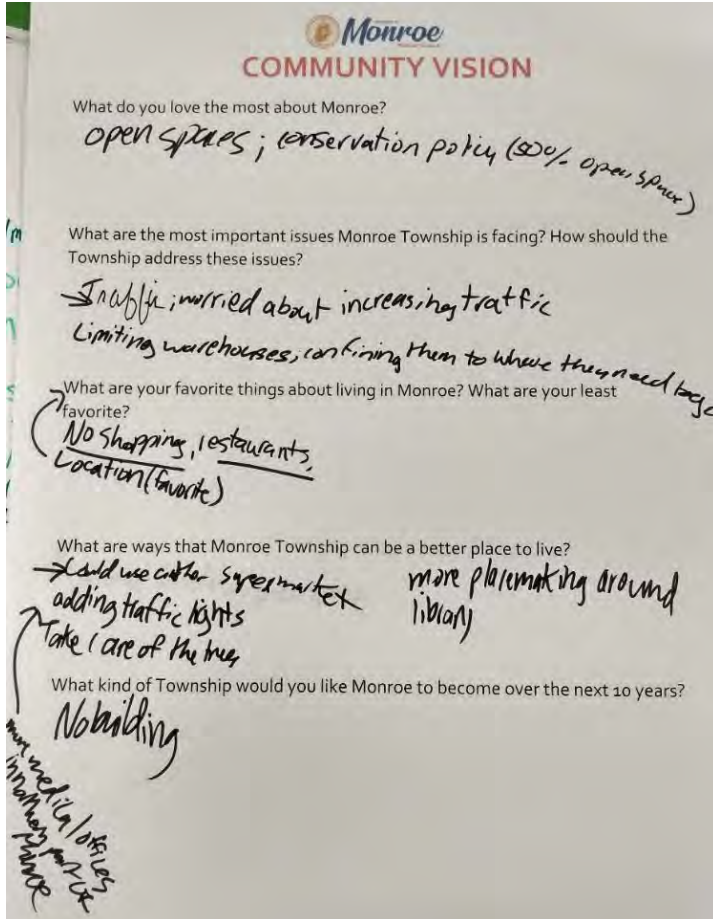
- No Safe route to walk to school
- No dedicated trails
- New developments need bike lanes

Transit needs

- Need transit connections from neighborhood (north Bergen mills rd.) to half acre and route 33
- Need shuttles for seniors in all neighborhoods
- Special needs adults should have access to Monroe busses



3. Community Vision



Community Vision concerns include:

Growth concerns

- Worried about increasing traffic
- Find appropriate locations for warehousing
- Inappropriate building

Environmental and Sustainability concerns

- Open Spaces, Conservation policy (50% open space)

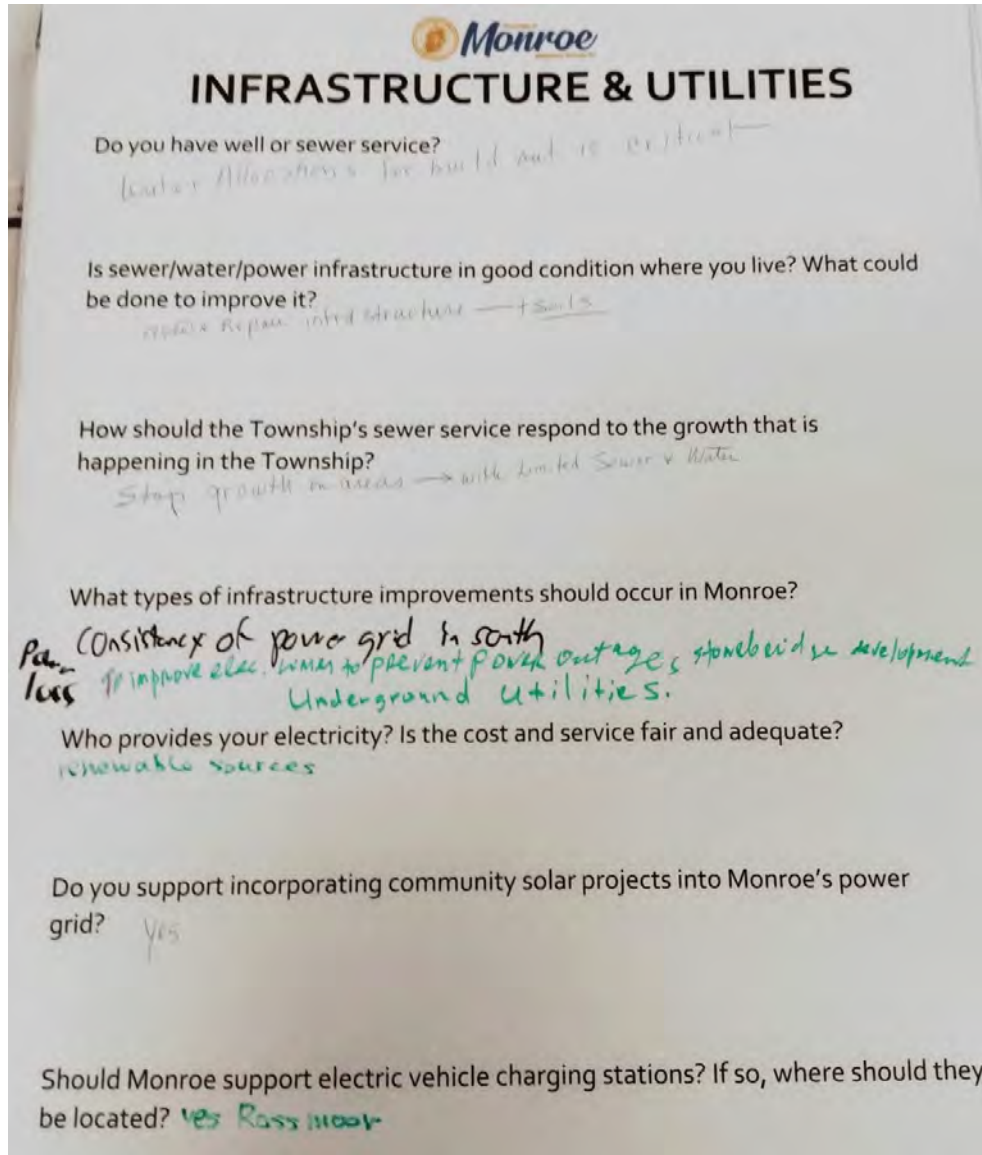
- Take care of the trees
- Preserving farmland

Desire for More Amenities and Activities

- No shopping or restaurants
- Retail and grocery stores
- More medical offices
- More Placemaking around library



4. Infrastructure & Utilities



Infrastructure and Utilities concerns include:

Capacity concerns

- Water allocations for build out is critical
- Stop growth in areas with limited sewer and water

Reliability Concerns

- Consistency of power grid in south
- Improve electricity to prevent power outages in Stonebridge development

- Review and repair infrastructure and soils

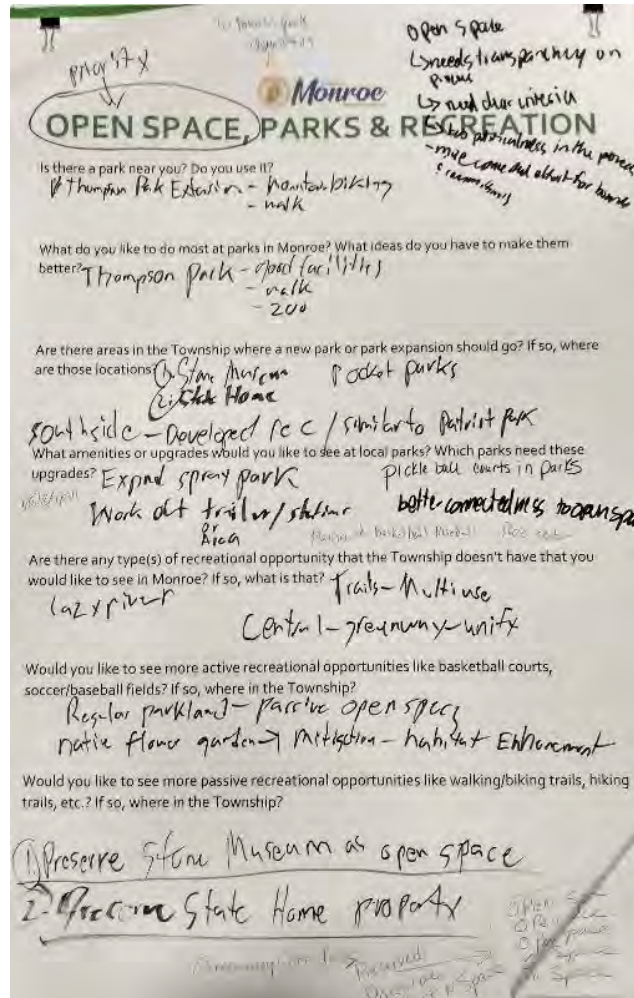
- Underground utilities

Sustainable Energy Systems

- Renewable sources
- Incorporate community solar projects into Monroe's power grid
- Electric vehicle charging stations in Rossmoor



5. Parks, Trails & Open Space



Parks, Trails & Open Space concerns include:

Quantity of open spaces

- Prioritize open space
- Need transparency in open space process with clear criteria
- Better connectedness to open space
- Unified central greenway
- Regular parkland – passive open spaces
- Preserve state home property
- Pocket Parks

Recreational Activities

- Volley ball
- Lazy river
- Expand spray park

- Thompson Park has good facilities, walking trails, and zoo
- Southside – develop recreation space similar to Patriot Park
- Playground basketball rec center
- Pickle ball courts in parks
- Workout trails
- Multi-use trails
- Preserve Stone Museum as open space

Ecological concerns

- Native flower garden for impact mitigation and habitat enhancement
- Greenway corridors



The Town of Monroe Master Plan Outreach & Circulation Plan Report
Community & Public Participation Summary for the August 4th Monroe Community Workshop



The Town of Monroe Master Plan
Outreach & Circulation Plan Report
Public Participation Summary for the
August 4th Community Workshop

Prepared By:



architects + engineers
practical approach. creative results.

Workshop Date:
August 4, 2021

Prepared Date:
August 5, 2021



Community & Public Participation

Purpose

This Master Plan Outreach & Circulation Plan Report cannot be written, nor recommendations made without input from the people who live, work, and visit Monroe. Without valuable public input, this document will not accurately represent the wants and needs of Monroe residents. The Master Plan Team is working hard to obtain ideas, opinions, feedback, and concerns from the public throughout the year long Master Plan process using “high touch” to “high tech” approaches, ranging from traditional workshops to online engagement. This collaborative approach provides community insight on the future of Monroe. The goal for the workshop was to engage, preserve, and enhance community outreach communicated by individuals to foster inclusivity and diversity of community assets. The Master Plan aimed to evolve such public engagement to proactively develop strategies for future implementation and development.

Community Workshops

A Master Plan Subcommittee comprised of Monroe community leaders is helping to guide the Master Plan process. The Master Plan Subcommittee believed input from several active Town organizations separate from public workshops would benefit the Master Plan Reexamination process. The Town of Monroe and the Master Plan Team worked with Community Stakeholders, the Planning Board, Open Space Committee, and the Environmental Commission planned six community workshops, four to occur in the beginning of the process to gather information and two additional meetings at the end to provide a “feedback loop” for residents.

The first public Community Workshop was held on Thursday June 17, 2021 from 5pm to 8pm in the evening at the Monroe Senior Center. Approximately 40 people attended the event.

The second public Community Workshop was held on Wednesday June 30, 2021 from 5pm to 8pm in the evening at the Monroe Township Recreation Center. Approximately 30 people attended this event.

The third public Community Workshop was held on Wednesday August 4, 2021 from 5pm to 8pm in the evening at the Monroe Township Public Library. Approximately 30 people attended this event.

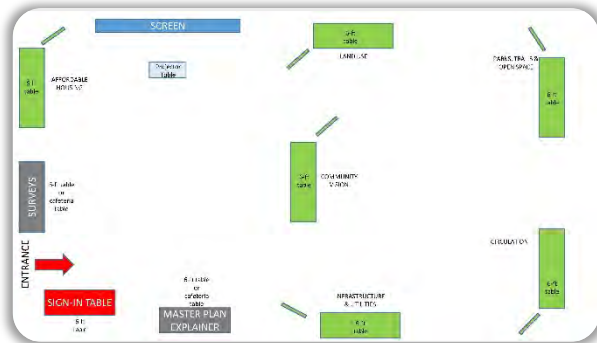


The Town of Monroe Master Plan Outreach & Circulation Plan Report
Community & Public Participation Summary for the August 4th Monroe Community Workshop



The workshop was spearheaded by Sanyogita Chavan of H2M Associates, the Planning Manager/Advisor preparing the Master Plan Report and head organizer of the event. Paul Cancilla, Staff Planner, was also in attendance.

Upon sign-in, participants were given a Master Plan flyer and an orientation/room layout handout for the night's activities. While waiting to sign-in participants were asked to indicate their desire for attendance to the workshop. Participants were then directed by team members to begin exploring topic tables located throughout the room.



Above: Room layout; Right: Master Plan Reexam Flyer





The Town of Monroe Master Plan Outreach & Circulation Plan Report Community & Public Participation Summary for the August 4th Monroe Community Workshop



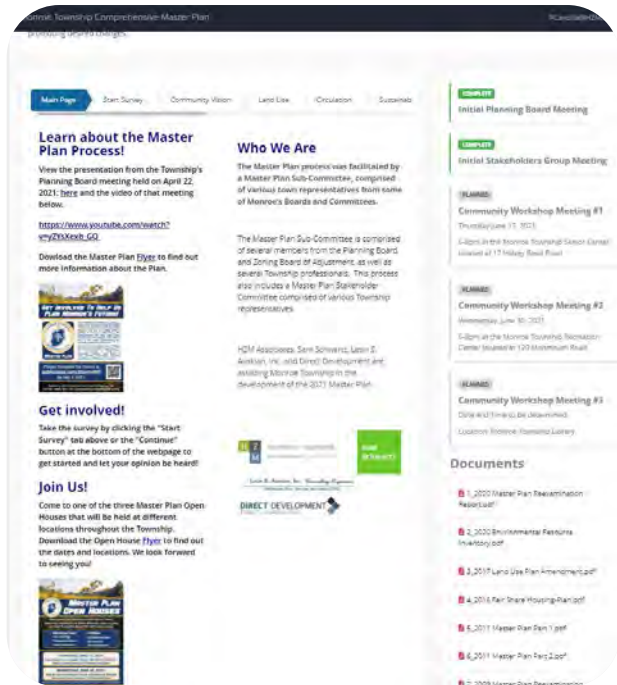
The Master Plan Report and the purposes of the night's workshop were the following:

1. To gain an understanding of Monroe community issues through the eyes of residents.
2. To promote the Master Plan Report public participation process by encouraging participants to be ambassadors to the Plan.

Attendees were notified upon signing in to the workshop of the public survey website, <https://publicinput.com/MonroeMP> and were encouraged to take the online survey in their free time. It was also pointed out that the workshop included a survey table with iPads for online survey taking.

Interactive Portion

This interactive part of the workshop required workshop participants to join in conversation with the “topic table” facilitators broken out into (1) **Land Use**, (2) **Circulation**, (3) **Community Vision** (4) **Infrastructure & Utilities**, and (5) **Parks, Trails & Open Space** to express their opinions, ideas, ask questions, and state their concerns. Each Topic Table was equipped with a handout for participants containing a 3-4 bulleted list of topics that could be discussed and a handful of guidance questions to help kickstart the brainstorming/interactive participation process. Each “topic table” was facilitated by a Master Plan Team member. A summary of issues resulting from the June 30th workshop is listed on the following pages. **Bolded** items indicate popular or repeated sentiments.





2. Circulation

CULTURAL ARTS COMM. TRIPS - LEAVE FROM MUNI BUILDING BUT SOME CANNOT GET THERE

Monroe CIRCULATION

Are you able to easily travel to destinations within the Township? Are you able to easily travel to destinations outside of the Township?
NO GOOD EAST/WEST ROADS

Do you find the Public Transit in Monroe to be accessible and easy to use? What improvements would you like to see?
**ACCESS TO PARK + RIDE + TRANSP. FOR DISABLED
MORE ACCESSIBILITY - MORE CONVENIENT STOPS/LOCATIONS - INCL. NEIGHBORING MUNI'S. - SERVICES TO PARKWAY/ISC/NORTH JERSEY**

For all modes of transportation, do you find it easy and/or comfortable to travel from Point A to Point B? Where do you experience difficult or uncomfortable conditions?
**SAFE + MORE PARK + RIDE.
WOULD LIKE TO BIKE TO THOMPSON PK**

Are there destinations you frequently walk or bike to? Are there destinations you would like to bike or walk to but do not?
ACCESS TO NEIGHBORING MUNICIPALITIES/RESTAURANTS + SHOPPING NOT CONVENIENT TO RIDE.

What are the obstacles to biking and walking in Monroe?
**NEED MORE ACTIVE TRANSP. - INCLUDING IN THOMPSON PK.
NEED SAFE INFRASTRUCTURE TO BIKE + WALK**

Would you like to see bike lanes in Monroe? Why/Why not? Are there specific roadways you would like to bike on if bike lanes existed
*** NEED MORE BIKE LANES - on COUNTY RDS + THOMPSON PARK
SAFE BIKE FACILITIES - ROADS TOO NARROW SPEEDS TOO HIGH**



Circulation concerns include:

Vehicle Needs

- No good east/west roads

Bike & Pedestrian Needs

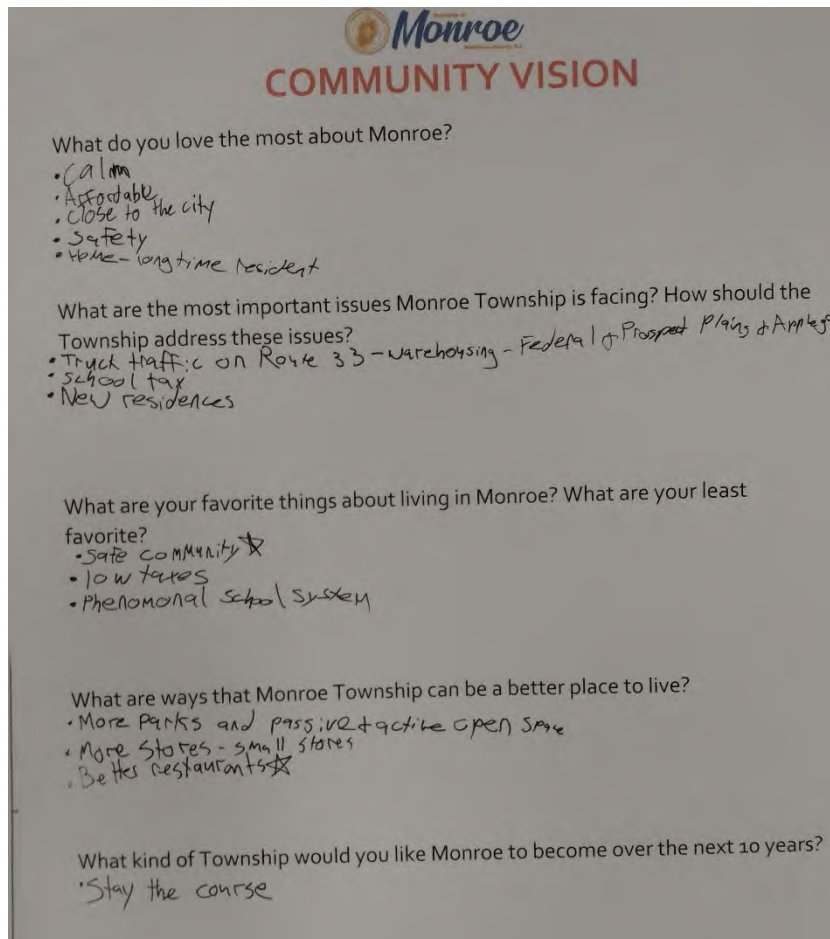
- Would like bike/walk access to neighboring municipalities, restaurants, and shopping
- Lack of convenient bike routes
- Bike routes seem unsafe – roads too narrow and speeds too high
- Need active transport in Thompson Park

Transit needs

- Cultural Arts Commission hosts trips which leave from municipal building, but some cannot get there
- Need alternative modes connecting to transit
- Need access to park and ride for disabled
- Need more accessibility and more convenient stops/locations including neighboring municipalities



3. Community Vision



Community Vision concerns include:

Growth concerns

- Increased truck traffic
- Many residential developments
- Taxes remain low compared to the county
- Need to keep schools great
- Library should be expanded to meet all the needs of the Township (northeast section where new residential development is going)

Environmental and Sustainability concerns

- Need more open spaces – both active and passive

Desire for More Amenities and Activities

- Need more stores, including smaller stores
- Need more restaurants

Appendix C

Draft Master Plan Presentation to Planning Board



Township of
Monroe
Middlesex County, NJ

MONROE TOWNSHIP
DRAFT MASTER PLAN
PLANNING BOARD MEETING

AUGUST 25, 2022

Sam
Schwartz

H

2

M

WHAT IS A MASTER PLAN?

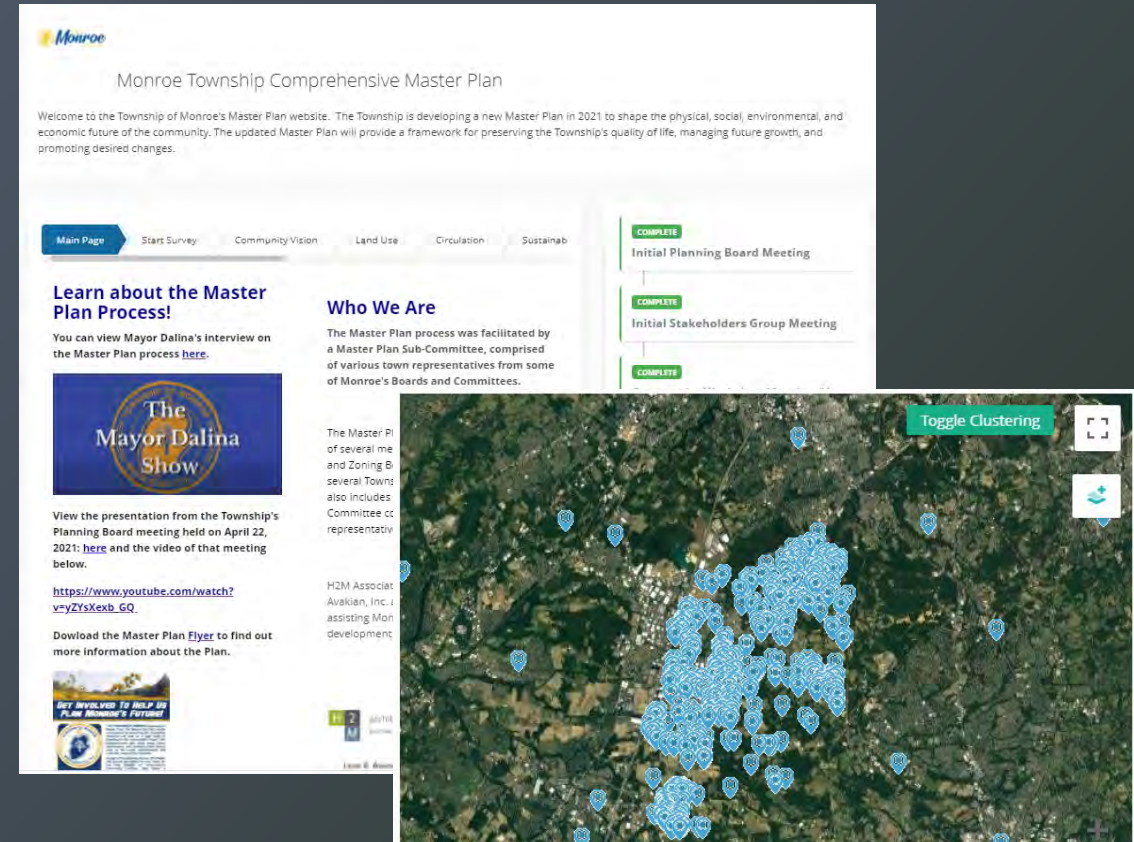
- THE **MASTER PLAN** IS A GUIDING DOCUMENT FOR MULTI-DISCIPLINARY PLANNING AND INVESTMENT IN THE TOWNSHIP OF MONROE FOR THE NEXT 10+ YEARS.
- ELEMENTS PREPARED INCLUDE:
 - **LAND USE**
 - **CIRCULATION**
 - **OPEN SPACE**
 - **INFRASTRUCTURE & UTILITIES**
 - **RECYCLING**
- **LAND USE PLAN ELEMENT AND HOUSING PLAN ELEMENT** PROVIDE A POLICY FRAMEWORK FOR ADOPTION OF ZONING ORDINANCES.

■ Recommendations will provide land use policy changes and ordinance changes.

Element Recommendation Plan				
Recommendation	Implementing Party	Timeframe	Completed	Year Completed
Recommendation Category				
1 Element Recommendation	Township and/or partner	Short Medium Long Ongoing	✓	Insert Year

PUBLIC INPUT WEBSITE

- RECEIVED SIGNIFICANT FEEDBACK FROM RESIDENTS
- WEBSITE IS UPDATED WITH ALL THE MOST RECENT MATERIALS
- RESULTS FROM THE SURVEY HAVE BEEN GENERATED AND ARE INCLUDED AS AN APPENDIX TO THE MASTER PLAN
- RESPONSES FROM RESIDENTS HAVE BEEN INCORPORATED INTO THE MASTER PLAN



Monroe Township Comprehensive Master Plan

Welcome to the Township of Monroe's Master Plan website. The Township is developing a new Master Plan in 2021 to shape the physical, social, environmental, and economic future of the community. The updated Master Plan will provide a framework for preserving the Township's quality of life, managing future growth, and promoting desired changes.

Main Page | Start Survey | Community/Vision | Land Use | Circulation | Sustainab

Learn about the Master Plan Process!
You can view Mayor Dalina's interview on the Master Plan process [here](#).

Who We Are
The Master Plan process was facilitated by a Master Plan Sub-Committee, comprised of various town representatives from some of Monroe's Boards and Committees.

Initial Planning Board Meeting
Initial Stakeholders Group Meeting

View the presentation from the Township's Planning Board meeting held on April 22, 2021: [here](#) and the video of that meeting below.

https://www.youtube.com/watch?v=yZsXeb_GQ

Download the Master Plan Flyer to find out more information about the Plan.

The Master Plan of several me and Zoning B several Town; also includes Committee cc representativ

H2M Associat Avakian, Inc. i assisting Mon development

Toggle Clustering

Monroe Township Comprehensive Master Plan				
Project Engagement				
VIEWS	PARTICIPANTS	RESPONSES	COMMENTS	SUBSCRIBERS
8,608	1,795	86,591	5,498	2

<https://publicinput.com/MonroeMP>

MASTER PLAN SUBCOMMITTEE & STAKEHOLDER GROUP

SUBCOMMITTEE

- MADE UP OF MEMBERS OF THE PLANNING AND ZONING BOARD AS WELL AS BOARD PROFESSIONALS
- SERVED AS LIAISONS TO THE TOWNSHIP COUNCIL, PLANNING BOARD, ZONING BOARD, AND ENVIRONMENTAL COMMISSION
- PROVIDED TECHNICAL KNOWLEDGE AND COMMUNITY INFORMATION

STAKEHOLDER GROUP

- MEMBERS OF THE COMMUNITY WITH AN ARRAY OF EXPERTISE AND KNOWLEDGE
- PROVIDED ADDITIONAL FEEDBACK WITH UNIQUE PERSPECTIVES AS RESIDENTS OF THE COMMUNITY

COMMUNITY WORKSHOPS

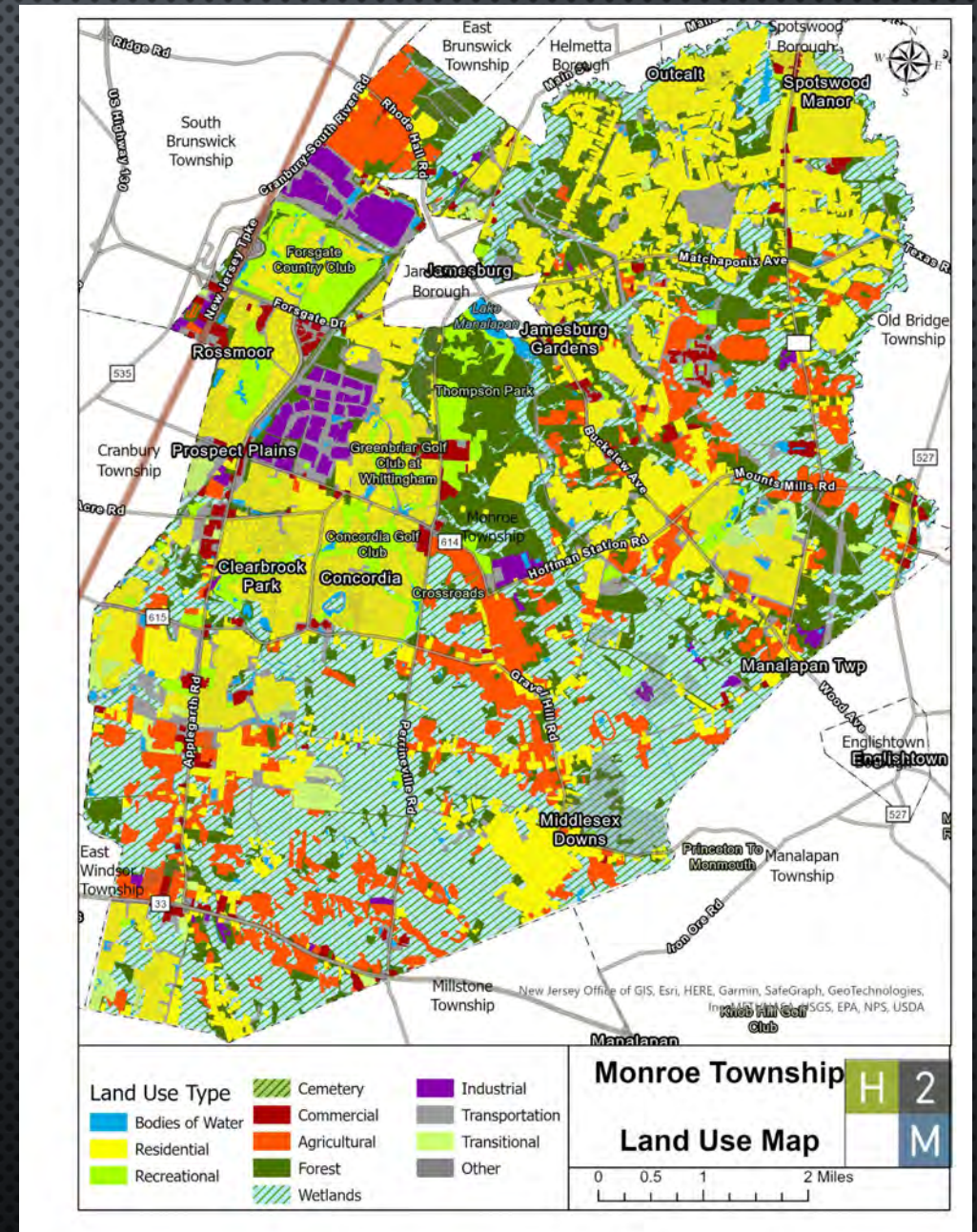
- THREE COMMUNITY WORKSHOPS
 - JUNE 17, 2021
 - JUNE 30, 2021
 - AUGUST 4, 2021

APPROXIMATELY 40 ATTENDEES TO EACH WORKSHOP. MAJOR ISSUES DISCUSSED INCLUDING COMMERCIAL DESIRES, SUCH AS RESTAURANTS AND SUPERMARKETS; OVERDEVELOPMENT OF NEIGHBORHOODS; AND PRESERVATION OF OPEN SPACE.



LAND USE TRENDS

- ❖ Residential Development largely as a result of statewide affordable housing mandate
- ❖ Warehousing & e-commerce
- ❖ Lack of commercial development
- ❖ Loss of rural character
- ❖ Development constraints



LAND USE GOALS



Achieve a balance of land use types that maintains and enhances the quality of life of the Township.



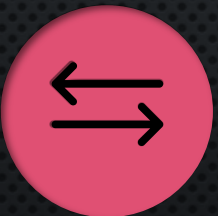
Promote industrial development in appropriate areas of the Township.



Encourage appropriate commercial development in areas of population concentration and where existing infrastructure can accommodate.



Develop and implement policies that comprehensively address the needs of an aging population.



Encourage redevelopment and infill development where it is feasible in Monroe to promote a more efficient use of land and existing infrastructure.



Ensure that Monroe has in place sufficient strategies to minimize natural hazard risks and climate change vulnerability.

RESIDENTIAL RECOMMENDATIONS

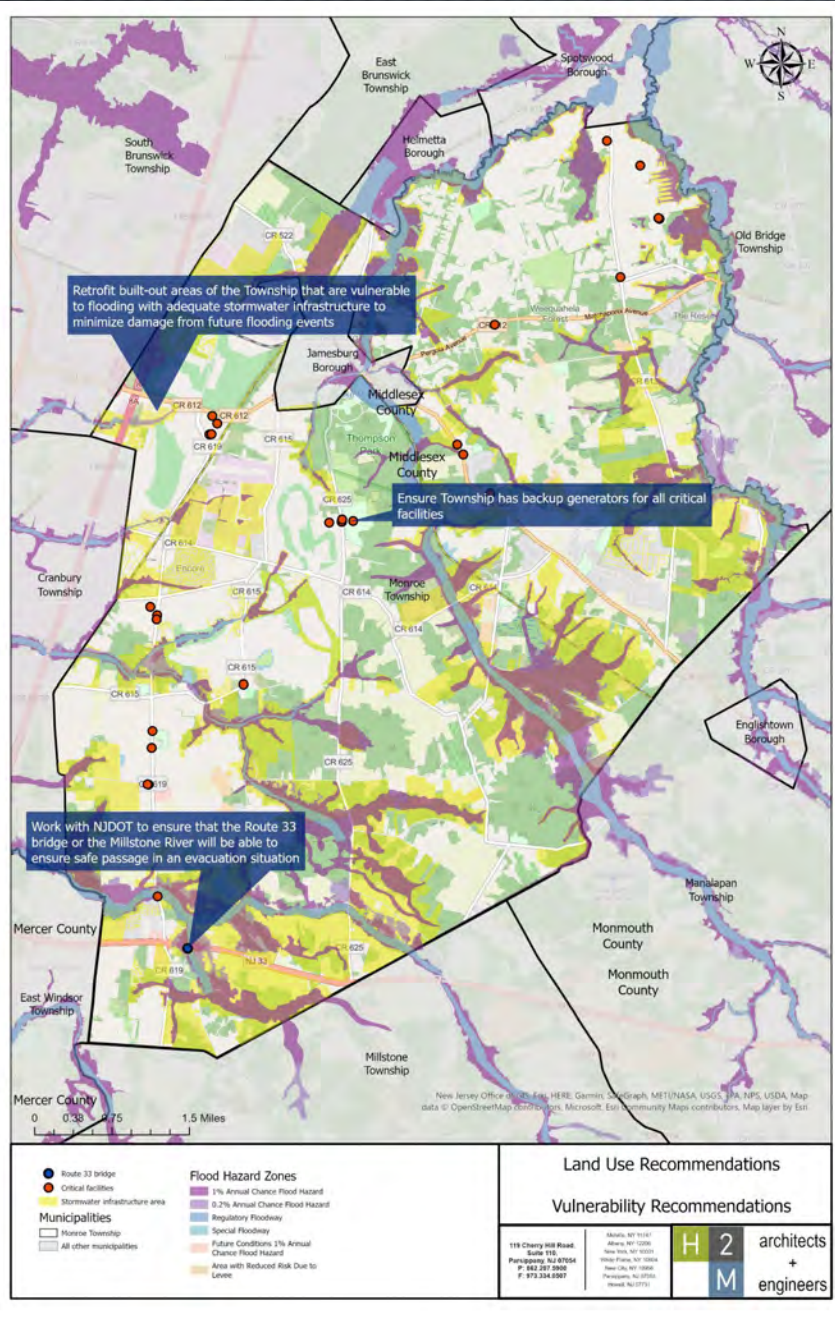
- EVALUATE THE POTENTIAL TO REZONE THE R30 ZONE ON N DISBROW HILL ROAD TO THE R3A ZONE.
- EVALUATE THE POTENTIAL TO REZONE THE R60 ZONE ON SPOTSWOOD-ENGLISHTOWN ROAD TO THE R3A ZONE.
- ENSURE THAT OFF-STREET PARKING REQUIREMENTS FOR RESIDENTIAL USES COMPLY WITH RSIS STANDARDS.
- CREATE AN OPEN SPACE ZONE



COMMERCIAL RECOMMENDATIONS

- DEVELOP DEFINITIONS FOR MODERN COMMERCIAL AND LIGHT INDUSTRIAL USES
- REVIEW & ADJUST OFF-STREET PARKING REQUIREMENTS.
- EVALUATE CHANGES TO THE SPOTSWOOD-ENGLISHTOWN RD CORRIDOR.
- ALLOW FOR COMMERCIAL AND/OR LIGHT INDUSTRIAL IN MU-HD-R-AH ZONE.
- POTENTIALLY USE REDEVELOPMENT DESIGNATION FOR UNDERUTILIZED OFFICE SPACES.
- PERMIT HOTEL USE IN THE PRGC ZONE.

CLIMATE CHANGE VULNERABILITY ASSESSMENT



- MAIN VULNERABILITY ISSUES AND RECOMMENDATIONS INCLUDE:
 - MITIGATE FLOOD HAZARDS ALONG CEDAR BROOK, MANALAPAN BROOK, WIGWAM BROOK, ETC.
 - ACQUIRE, ELEVATE, OR FLOODPROOF STRUCTURES IN FLOOD-PRONE AREAS
 - WORK WITH COUNTY AND NEIGHBORING MUNICIPALITIES TO CREATE A REGIONAL FLOOD CONTROL COMMISSION.
 - TAKE PROACTIVE MEASURES TO PREPARE FOR FUTURE EXTREME WEATHER EVENTS.
 - ENSURE THAT CRITICAL FACILITIES HAVE BACKUP GENERATORS

CIRCULATION GOALS



Improve access and safety of active transportation modes



Develop Off-Road, Shared-Use Paths



Develop On-Road bicycle facilities



Improve traffic circulation and operations



Reduce vehicular, bicycle, and pedestrian crashes



Improve the safe movement of freight traffic



CIRCULATION RECOMMENDATIONS

- **ADOPT A COMPLETE STREETS POLICY OR ORDINANCE.**
- **REVIEW AND UPDATE THE 2009 MONROE TOWNSHIP TRAIL NETWORK DEVELOPMENT PLAN.**
- **CONDUCT A TOWNSHIP-WIDE TRAFFIC STUDY/CIRCULATION PLAN TO EVALUATE THE CUMULATIVE IMPACTS OF ALL THE DEVELOPMENT PROJECTS OCCURRING AS A RESULT OF THE STATEWIDE AFFORDABLE HOUSING MANDATE.**
- **IMPLEMENT LOW-COST SYSTEMIC SAFETY IMPROVEMENTS.**
- **ASSIGN RESOURCES TO ACTIVELY PARTICIPATE IN THE SOUTHERN MIDDLESEX COUNTY FREIGHT MOVEMENT STUDY.**

OPEN SPACE GOALS



Continue the trend in open space acquisition, environmentally sensitive area preservation, and farmland preservation through various planning techniques with the goal of retaining 50% of the Township as preserved lands.



Encourage a network of pedestrian greenways along stream corridors and bicycle paths which link residential neighborhoods with open space, community facilities, and commercial areas.



Ensure quality and accessible recreational opportunities for residents of all ages.



Preserve and enhance rural character of certain areas of the Township, particularly the PA-4 Rural Planning Area in accordance with the State Plan.

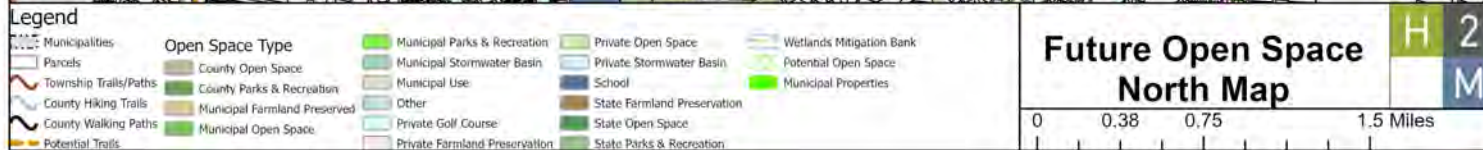
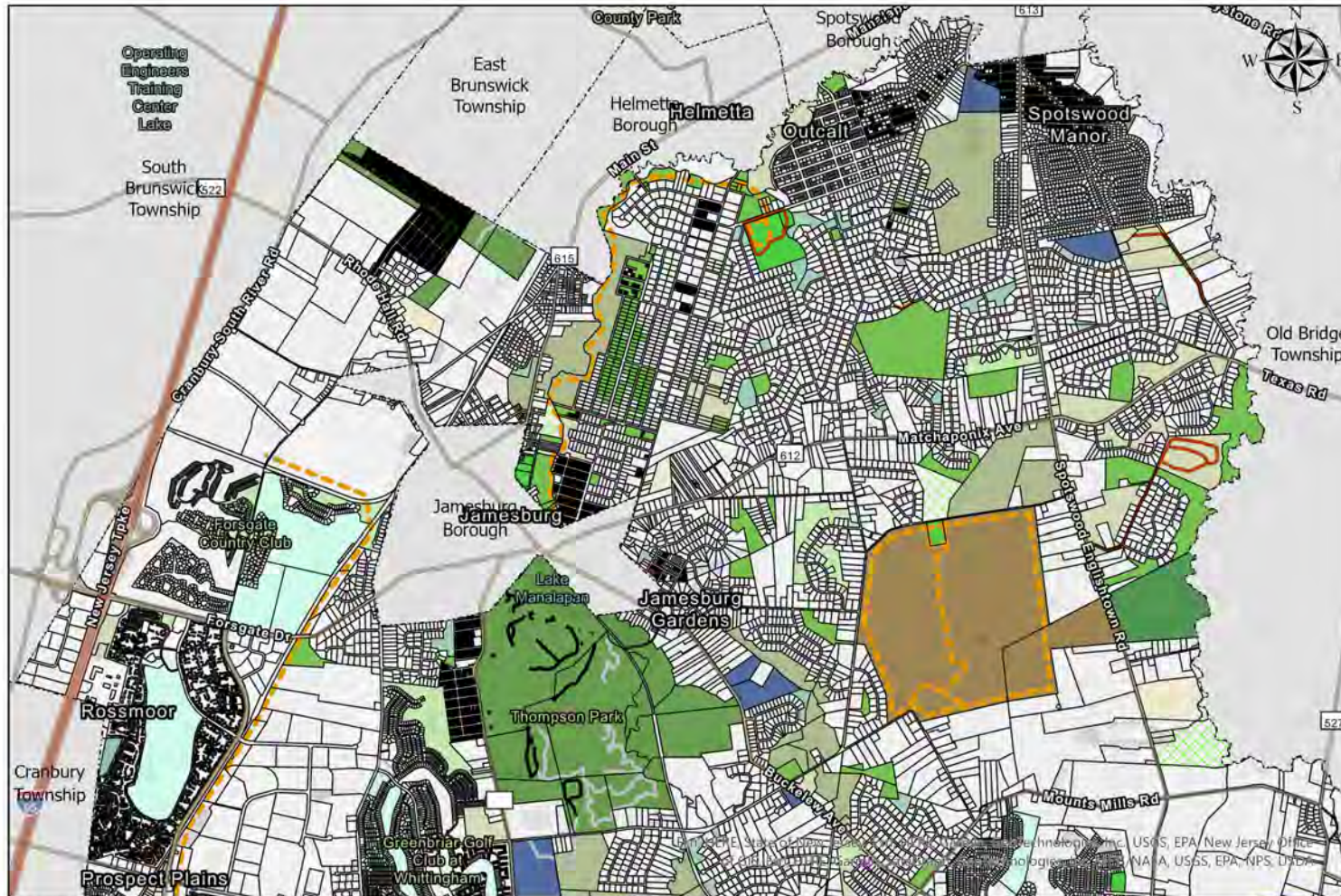


OPEN SPACE RECOMMENDATIONS

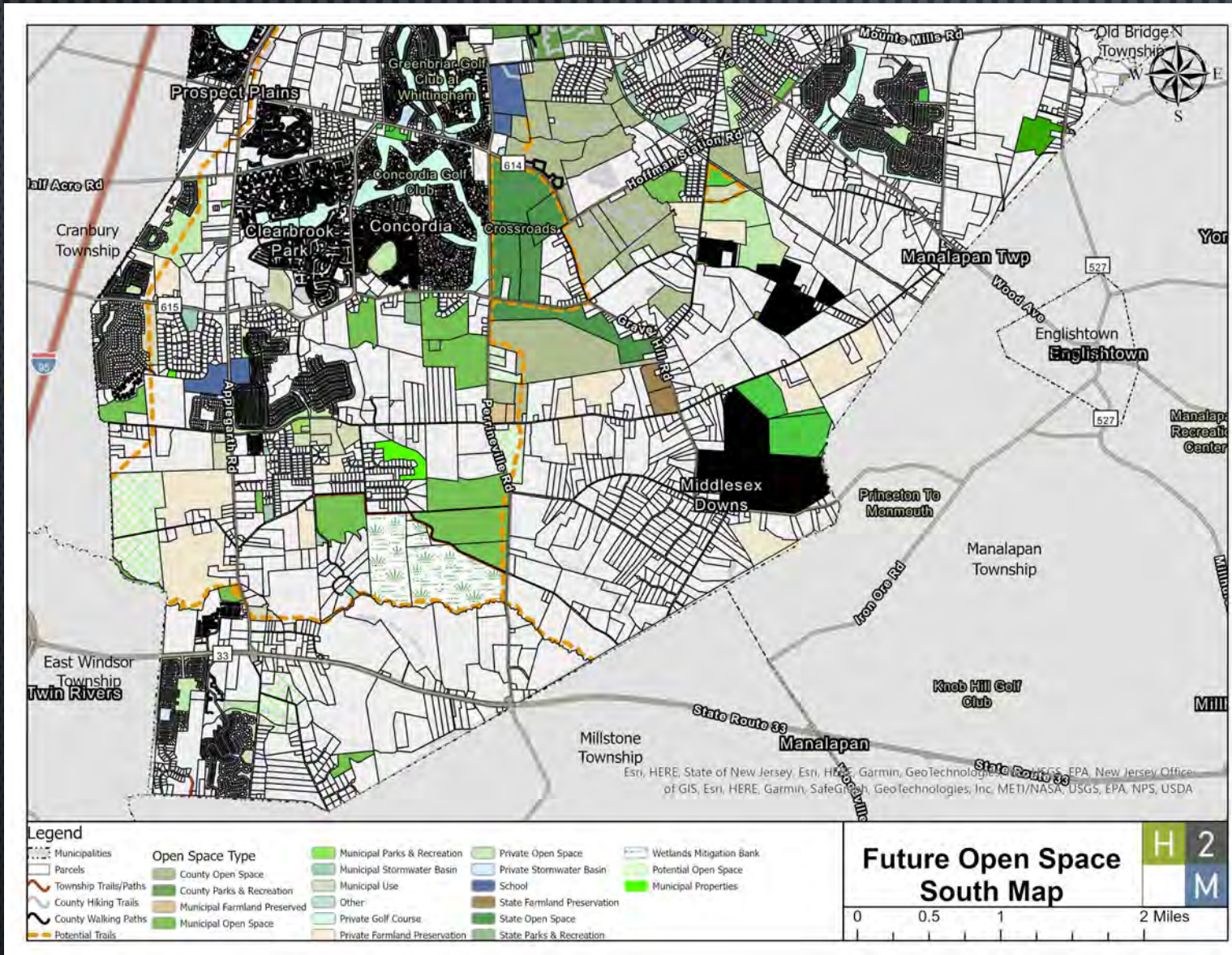
- FOCUS ATTENTION ON PARKLAND EXPANSION IN SOUTHERN HALF OF THE TOWNSHIP.
- ADD RECREATIONAL FACILITIES TO FILL FACILITIES GAP AS DETAILED IN OPEN SPACE PLAN.
- UTILIZE CRITERIA FOR OPEN SPACE ACQUISITION WHEN PLANNING FOR FUTURE OPEN SPACE ACQUISITION.
- REVIEW THE POTENTIAL OPEN SPACE PARCELS TABLE DETAILED IN PLAN.
- WORK WITH MIDDLESEX COUNTY TO PRESERVE TARGET FARMS OF THE COUNTY'S FARMLAND PRESERVATION PROGRAM.

FUTURE OPEN SPACE (NORTH)

- OPEN SPACE PRESERVATION
- MANALAPAN BROOK GREENWAY
- PSE&G RIGHT-OF-WAY TRAIL



FUTURE OPEN SPACE (SOUTH)



- POTENTIAL FOR OPEN SPACE AND FARMLAND PRESERVATION PARCELS
- REGIONAL PARK IN SOUTHWESTERN AREA OF TOWNSHIP
- UNION VALLEY ROAD TRAIL
- MILLSTONE RIVER GREENWAY TRAIL

UTILITIES GOALS



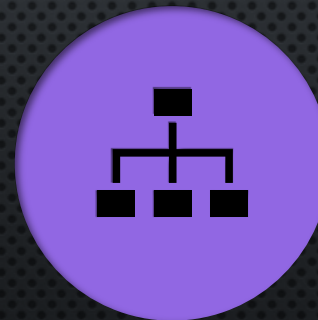
Achieve coordination between the extension of utilities with the growth policies of the land use plan.



To ensure that Township sewer and water connections allow for development in appropriate areas in accordance with the State Plan planning areas.



Analyze and mitigate issues associated with increased prevalence, intensity, and duration of storm events and climate change impacts.



Create updated Asset Inventory for the purposes of creating a baseline assessment for future capital expenditures.



UTILITIES RECOMMENDATIONS

- CONTINUE TO FUND EXTENSIONS OF UTILITIES THROUGH FAIR SHARE COST REIMBURSEMENT AGREEMENTS WITH DEVELOPERS AND PRIVATE PROPERTY OWNERS.
- CONTINUE TO ENSURE DEVELOPERS ARE SUBJECT TO FUNDING A PROPORTIONATE SHARE OF ANY OFF-TRACT IMPROVEMENTS FOR UTILITY SERVICES, TO THE EXTENT PERMITTED BY LAW.
- BASED ON THE TOWNSHIP'S 2022 LAND USE PLAN AND BUILDOUT ANALYSIS IDENTIFY THE REQUIRED CONVEYANCE AND TREATMENT CAPACITY IN ORDER TO DETERMINE FUTURE FACILITY REQUIREMENTS.
- CONSIDER ALTERNATIVE ENERGY SOURCES AT ALL PUBLIC FACILITIES INCLUDING SOLAR AND GEOTHERMAL SYSTEMS.

RECYCLING GOALS



Increase education and understanding of the importance of recycling and recycling programs.



Increase recycling levels in the Township that are consistent with statewide goals.



Improve recycling by businesses in the Township.



RECYCLING RECOMMENDATIONS

- PERFORM AN INVENTORY OF COMMERCIAL AND INSTITUTIONAL ESTABLISHMENTS AND CATEGORIZE THE TYPES OF GENERATORS AND IDENTIFY TARGETED RECYCLING OPPORTUNITIES.
- FORMALIZE PARTNERSHIP FOR RECYCLING ENFORCEMENT.
- CONTINUE TO MONITOR AND IMPROVE EDUCATION OF RECYCLING PROGRAMS.
- CONTINUE TO PURSUE GRANTS FROM STATE RECYCLING PROGRAMS

NEXT STEPS



The Planning Board and the public have the opportunity to provide initial feedback on the draft plan



Revisions to be made based on feedback received



Schedule additional meeting for adoption of the Master Plan

Appendix D

Build Out Analysis



Buildout Analysis

A buildout analysis creates a projection of a community’s maximum development potential based on a community’s existing land use conditions, parcel layouts, environmental constraints, and zoning regulations. The analysis provides insight to the future needs of the community and can aid the community in developing strategies to manage growth. The Land Use Plan includes a build-out analysis for Monroe, which considers the Township’s existing zoning district regulations, available developable land, environmental constraints, preserved lands and open space, and recently approved and proposed developments. This exercise will provide a conservative but realistic projection of Monroe’s maximum development potential for the next ten years based on existing conditions.

Tax parcel data was gathered and analyzed to identify existing vacant lands within residential zoning districts. Some vacant parcels were found to be not realistically developable due to their shape, size, or location and were removed from the analysis. The remaining lots were clipped to remove those constrained by flood plains and wetlands, with a 150-foot buffer distance created for wetlands. Parcels were identified by their existing zoning district, and applicable regulations were applied to estimate a realistic maximum number of residential units that could be developed in the Township. The resulting figure was reduced by 25% to account for space that is typically needed for infrastructure, roads, stormwater management, etc.

Approved and Proposed Development

In addition to the developable vacant residential parcels, included in this analysis is proposed and approved developments at the time of writing this Plan. Proposed and approved projects are mapped along with vacant lands. Developments that have been approved by the Township will add a total of 1,804 new dwelling units to Monroe’s housing stock, of which 408 are age-restricted and 15 are within care facilities.

Application No.	Block-Lot	Zone	Acres	Board/Approval	Description
PB-1227-20	55.01-8	LI	3.34	Planning Board/Approved	Warehouse development
PB-1231-20	8-8.5	HD	63.69	Planning Board/Approved	A delivery site which occupies a 301,320 square foot warehouse building
PB-1226-20	106.50-11, 106.50-12, 106.50-21, 106.50-22, 106.51-1 to 11, 106.51-21 to 32, 106.03-9 to 15,	R-60		Planning Board/Approved	16 Lot Subdivision (12 Single Family Dwelling Units)



Township of Monroe Master Plan Buildout Analysis

	20-21, 26-34; 106.06-1 to 26, 33 to 48				
PB-1218-19	47.01-8.01	NC		Planning Board	Addition to Commercial Retail Shopping Center
PB-1222-19	41-7	OP		Planning Board	Renovate and Expand Existing Building for Office Use
PB-1228-20	36-3.01, 36-3.03' 36-3.04, 36-3.05, 36-3.06	R-ARAF		Planning Board	Request for Amended Final Site Plan with Bulk Variances for minor additions to approved 213 townhome development
PB-1204-18	25-2.10-2.14	OP	18.499	Planning Board/Approved	Site Plan with Bulk Variances, modifying the unbuilt approved commercial space and medical office to add 139 age-restricted apartments. The proposed development is mixed use.
PB-1211-18	41-7	OP		Planning Board	Preliminary and final site plan with bulk variances for 4,130 SF addition to shopping center
PB-1213-18	36-1.09, 36-3, 36-6, 36-9.01, 36-9.02, 36-11.01	R-ARAF	132.414	Planning Board/Approved	townhouse apartment development. The project includes 213 two bedroom townhouses and 53 affordable apartments for active adults
PB-1219-19	55-4	LI	5.5	Planning Board/Approved	The proposed project includes 5.5 acres of tree cover and two former farmed tracts. The proposed project consists of a warehouse/storage establishment
PB-1220-19	6-12.06, 6-13.01, 6-14.01, 6-15.01, 6-23.01, 6-27.01	AHMU D-HD, HD	378.23	Planning Board/Approved	<u>Section 1</u> : block 6, lots 13.01 and 14.01 5,051 sf convenience store 12,600 sf retail space 12,600 sf office space 2,710 sf fast-food restaurant with drive-through 8,780 sf daycare



Township of Monroe Master Plan Buildout Analysis

					center 14,568 sf pharmacy w/ drive-through 131 age-restricted residential units; <u>Section 2</u> : block 6, lot 27.01 3,116 sf fast food restaurant w/ drive-through 1,750 sf fast food restaurant w/ drive-through 7,200 sf of retail space 3,517 sf bank 7,393 sf sit-down restaurant 75,770 sf supermarket 92 townhouse units; <u>Section 3</u> : block 6, lots 12.06, 15.01, and 23.01 466 townhouse units 56 duplex units 171 apartment units
PB-1229-20	53-24	R3A, VC-1	59.14	Planning Board/Pending	The proposed development includes 105 residential units which are composed of a 15-unit condo and three 30-unit condos. This development is part of a larger mixed-use development that is being built in phases.
PB-1204-18	25-2.09			Planning Board	The proposed development consists of modifying the unbuilt approved commercial space and medical office to add 139 age-restricted apartments. The proposed development is mixed use.
BA-5193-19	20-28.10 (Old 20-28.07)	RR-FLP		Zoning Board of Adjustments	Proposed 20 ft extension of an approved wireless tower
BA-5164-18	26-20.03	R-30		Zoning Board of Adjustments	Convert existing residence into medical office
BA-5171-19	27.02-17.02	R-30	2.41	Zoning Board of Adjustments/Pending	Conditional Use with bulk variances, Proposed Chabad Lubavitch Jewish Center/synagogue which will be a two-story building with 15,048 SF on the first floor and 9,000 SF on the second floor. The site will have 95 parking spaces
BA-5172-19	41-8	OP		Zoning Board of Adjustments	Create 3 lots



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BA-5178-19	42-7.02	R-30		Zoning Board of Adjustments	Dementia Care Facility/15 Resident Care Facility
BA-5137-17	53-15.07	R-60		Zoning Board of Adjustments	Highway construction company storage and maintenance facility
BA-5182-19	5-9.08	H-D		Zoning Board of Adjustments	Interpretation
BA-5195-20	77.06-17.04	R-60		Zoning Board of Adjustments	Ground mounted solar panels
BA-5198-20	82-3.01	R-30		Zoning Board of Adjustments	Warehouse
BA-5190-20	84-24	R-10		Zoning Board of Adjustments	
BA-5161-18	82-4.01	R30	18.93	Zoning Board of Adjustments/Pending	A 278,600 SF warehouse is proposed on this site along with lot 4.02.
BA-5165-18	81-1	R30	1.474	Zoning Board of Adjustments/Approved	The proposed development consists of a 9,656 square foot retail/commercial center
BA-5168-18	82-3.01	R30	67.82	Zoning Board of Adjustments/Approved	The proposed development consists of a 1,281,000 high-cube warehouse located on 3 lots within South Brunswick and one lot within Monroe.
BA-5204-21	4.01-15.01	HD, VC-2	0.0028	Zoning Board of Adjustments/Pending	Proposed mixed use with 8,363 SF of retail and a 2,411 SF Starbucks with drive-thru. The site is proposed to provide 65 parking spaces

Residential

The total maximum number of residential units that could be built based on existing zoning regulations and environmental constraints was found to be 2,440 dwelling units. The table below provides a breakdown of these units by zoning district:

ZONING DISTRICT	MAXIMUM PERMITTED RESIDENTIAL DENSITY (DWELLING UNITS PER ACRE)	TOTAL DEVELOPABLE VACANT ACRES	MAXIMUM DEVELOPMENT POTENTIAL (DWELLING UNITS)
AHMUD-HD	n/a	443.5	749
PD-SH	n/a	n/a	n/a
PRC	7	0.0	0.0
PRC-2	3.5	8.9	6
R10	3.48	7.2	5
R20	1.74	4.9	3
R30	1.16	85.7	60

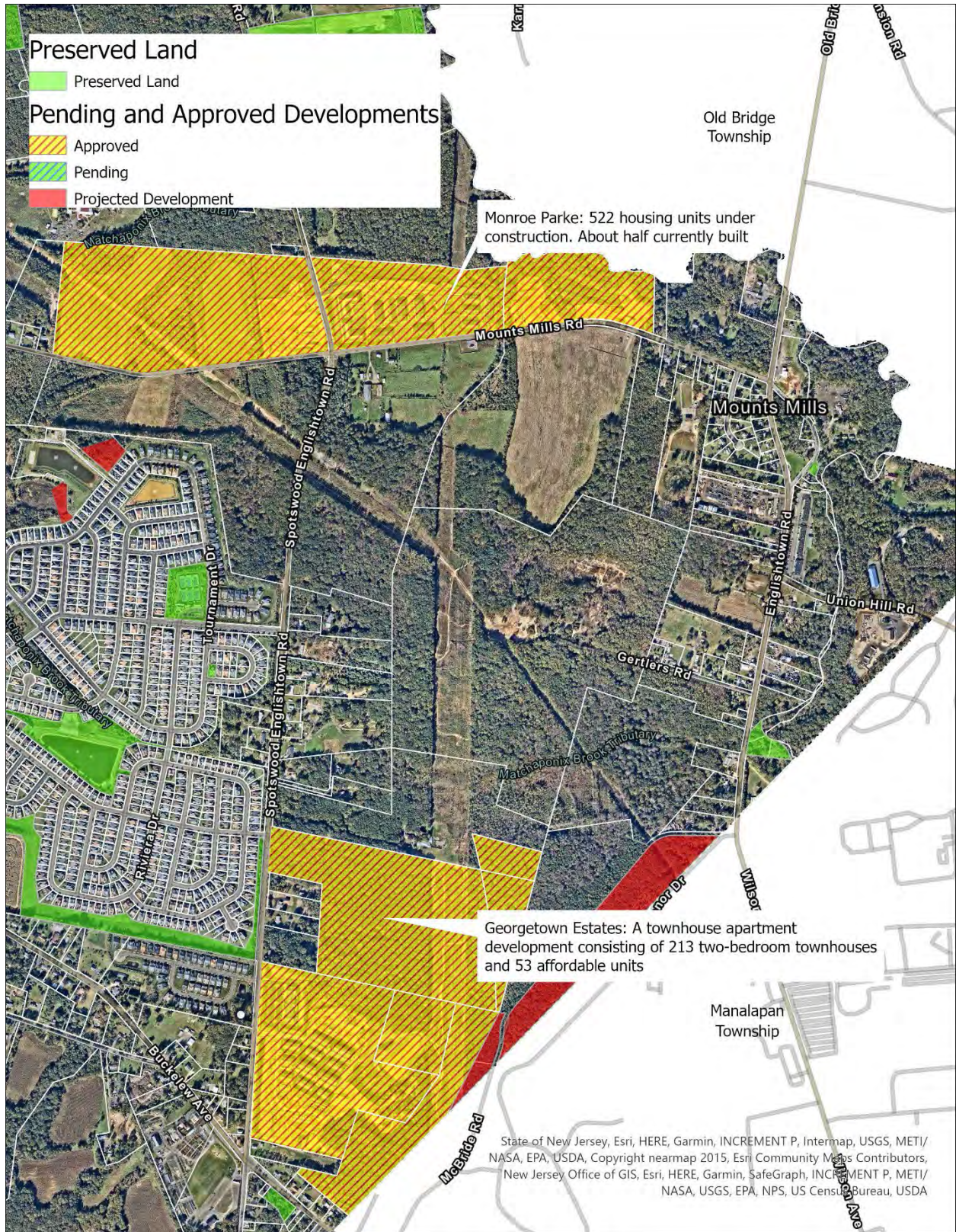


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R3A	0.27	4.8	3
R5	6.9	5.0	4
R60	0.58	9.9	7
R7.5	4.67	0.8	1
RR-FLP	0.27	1.5	1
VC-2	4	20.1	215
MU-HD-R-AH		190.9	1,386
TOTAL	n/a	783.2	2,440

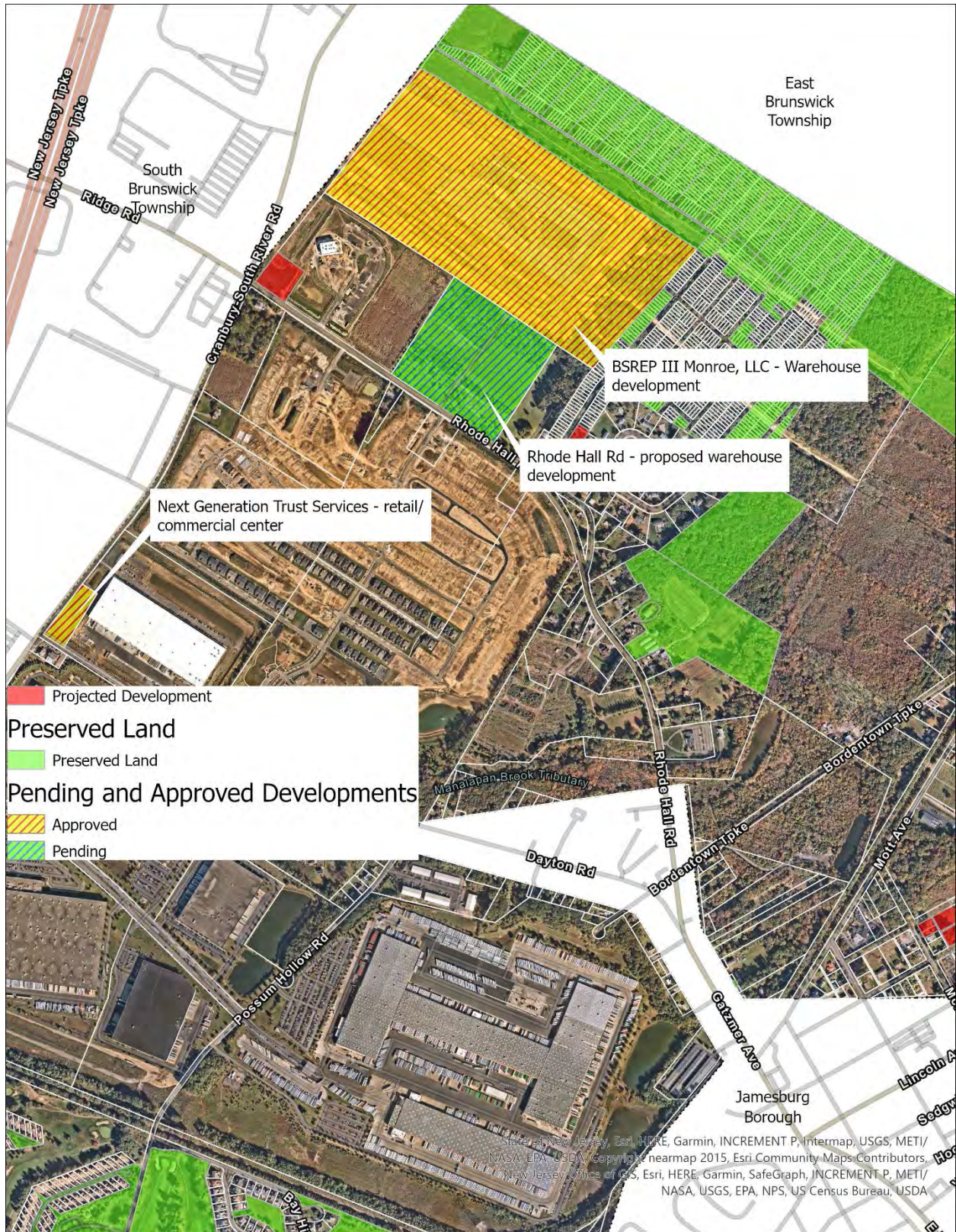


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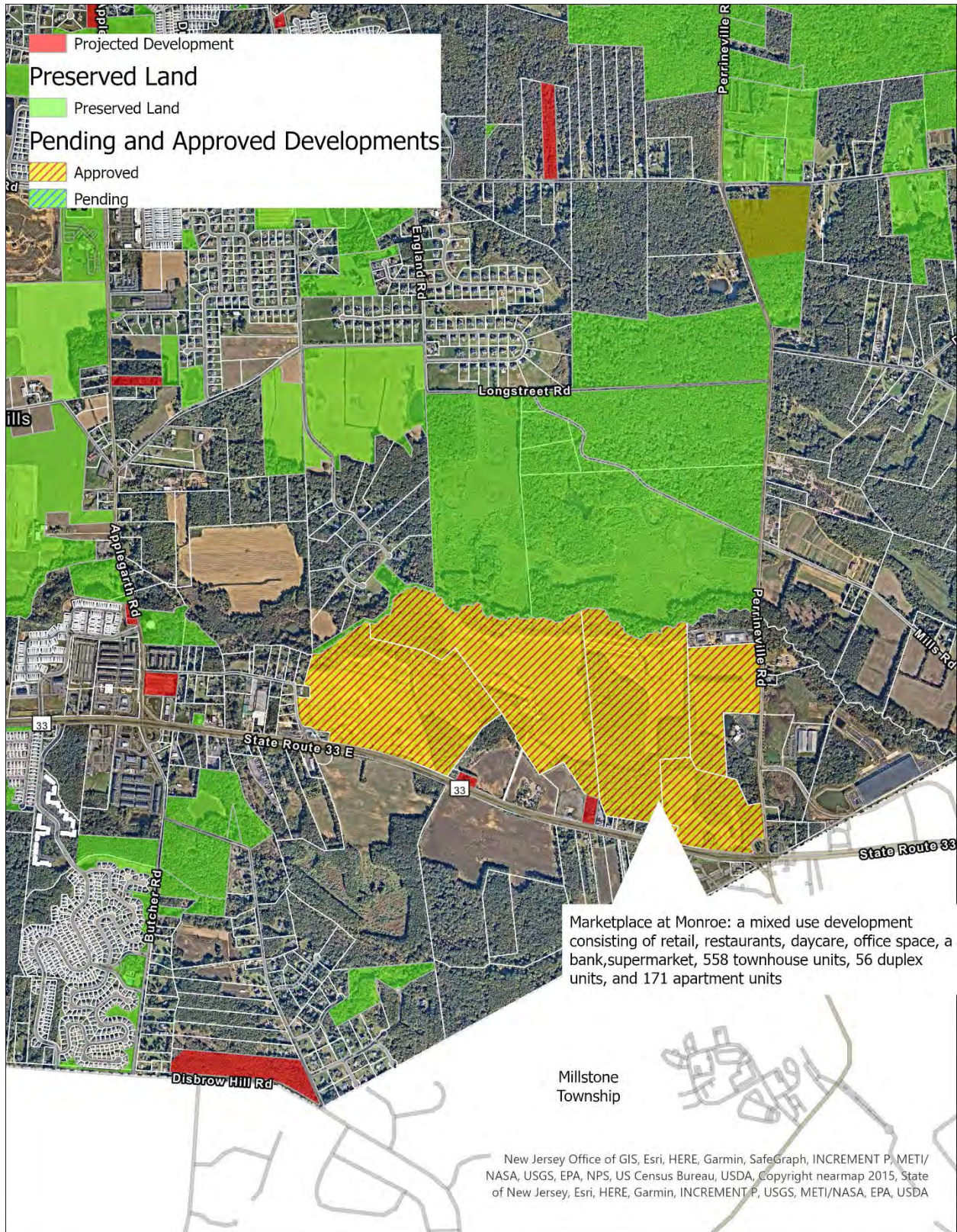


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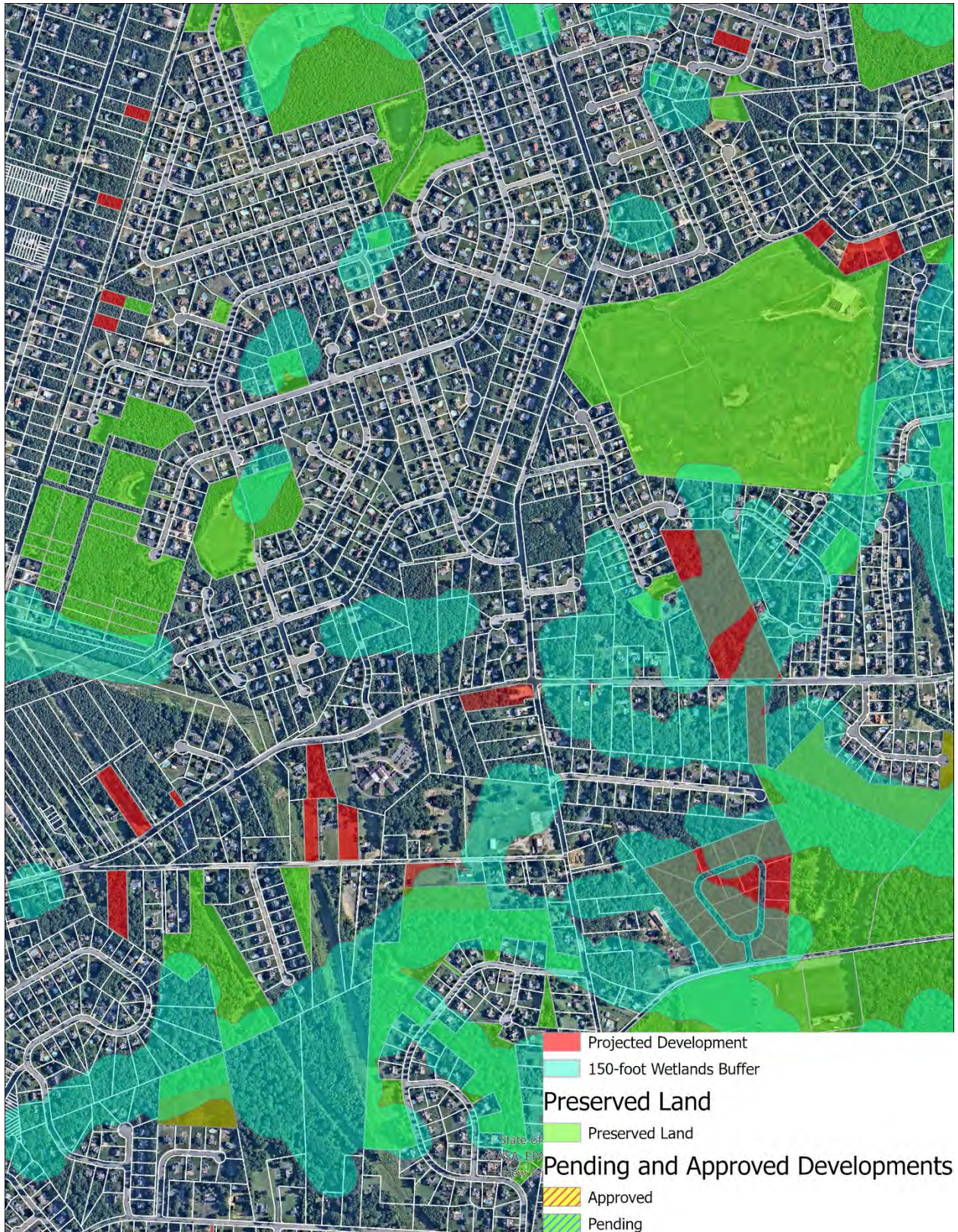


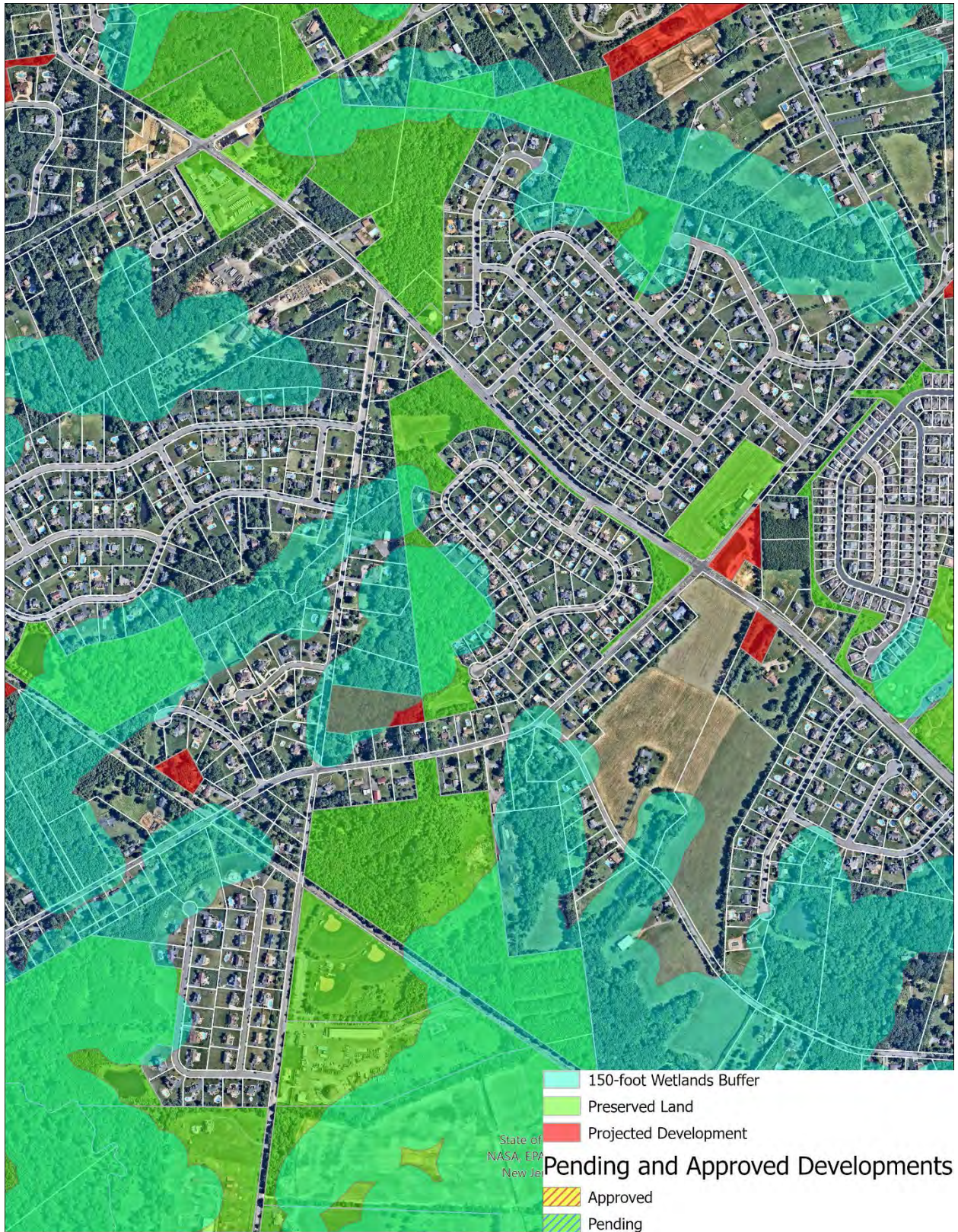
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Figures 1 and 2 below show currently vacant residential parcels. These lots are somewhat scattered throughout Monroe's residential zoning districts. The table above confirms the observation that a large majority of the vacant residential parcels are zoned R30. This district is medium-density and promotes low-density suburban residential development. Wetlands are a significant constraint to these parcels. The extent of Monroe's wetlands poses a challenge to utilizing the remaining greenfield sites.



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Non-Residential

District	Developable Acres	Maximum Building Coverage	Potential Square Feet Non-residential
HD	8.309272	35%	95,012
HD-R-AH	0	35%	n/a
LI	10.39705	40%	135,869
NC	3.897491	30%	38,199
VC-2	5.386698	30%	52,795
VC-1	0	30%	0
AHMUD-HD	400.99		151,062
MU-HD-R-AH	248.96	30%	93,789
Total	677.94	n/a	566,726

The analysis finds that Monroe has about 677.94 acres of vacant land that is zoned for either non-residential use or commercial uses as a part of a mixed-use development. These non-residential uses can include light industrial, office, and commercial space. However, a much smaller amount of area is actually developable, after accounting for wetlands constraints. Additionally, the majority of developable non-residential land is zoned LI Light Industrial, with much smaller amounts available for less intensive uses. A significant portion of neighborhood commercial land is within 150 feet of wetlands, and thus constrained. While several projects currently in development and in the approval process contain commercial development, this analysis suggests that Monroe may want to create strategies that focus developments on already built-out areas of the Township, which this build-out analysis did not calculate. The Township may want to also strategically plan for ways to balance the need for development of currently vacant land with the redevelopment of underutilized areas of the Township that can promote sustainable, smart growth.

Monroe’s remaining undeveloped land is currently zoned to included districts that allow multiple types of uses. Among these uses, found in both residential and non-residential districts, is agriculture. As such, the Township’s future land use plan should address how to balance competing goals and objectives. While Monroe has a stated objective of increasing the tax base with non-residential development, but the Township also seeks to preserve farmland and open space. At the same time, the Township must accommodate demand for residential development, and in particular its fair share affordable housing obligations.



Conclusion

Aside from currently approved and pending projects, there is limited room for potential residential developments. If zoning regulations remain as they are at the time of writing this Plan, there is a projected maximum of 2,440 additional dwelling units that could be added through greenfield development. This suggests that Monroe will continue to see residential growth through the approved developments JSM at Applegarth, Marketplace at Monroe, and Georgetown Estates among other not yet approved projects in order to fulfill its state mandated affordable housing requirements. Outside of these major residential developments, the Township is likely have little developable land for significant development activity. As a result, the Township may want to consider infill development utilizing redevelopment and other changes to the zoning code to create opportunities to provide the types of services and land use types that could accompany future residential development.

Monroe's remaining undeveloped land is currently zoned to include districts that allow multiple types of uses. Among these uses, found in both residential and non-residential districts, is agriculture. As such, the Township's future land use plan aims to address how to balance competing goals and objectives. Projections discussed earlier in this land use plan indicate that there will be demand for commercial and light industrial uses. Redevelopment of underutilized parcels represents an opportunity to both meet the demand and to improve the Township's built environment through creating greater connectivity and overall improved design.

It should be noted that while this analysis provides realistic estimations, some factors were left out which could alter the actual future land uses in Monroe. Among these are availability of public infrastructure, market forces, individual site design choices, future open space acquisitions and dedications, and population and demographic changes. Another factor to note is that the residential estimates were based on vacant parcels and do not include development on existing farmland. It is possible that the Township may see currently unreserved farm parcels converted to residential development, particularly in areas of the Township that could readily be connected to sewer services. These types of conversions could impact the overall estimate for the number of new residential units.