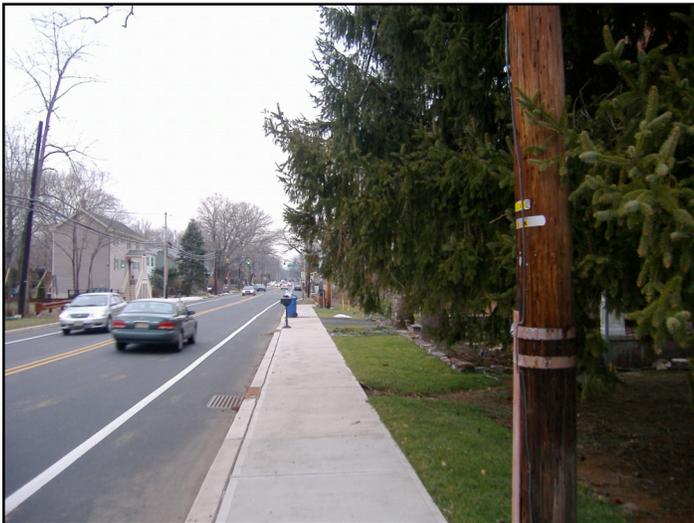
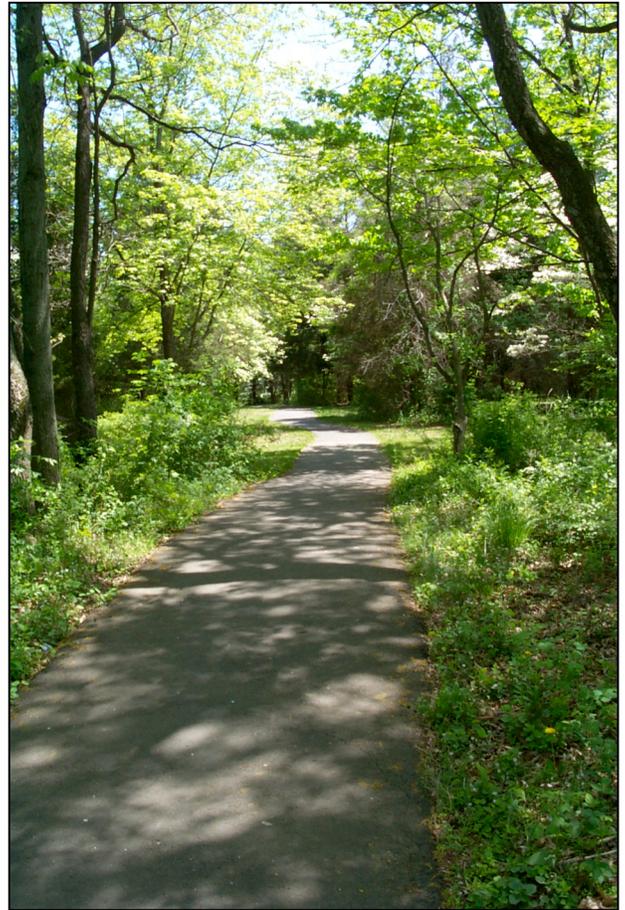


# BICYCLE AND PEDESTRIAN PLAN

## BRANCBURG TOWNSHIP SOMERSET COUNTY, NEW JERSEY



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*Prepared by:*  
*Branchburg Township Planning Board*  
*In Consultation with:*  
*Banisch Associates, Inc., Flemington, NJ*

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## **INTRODUCTION**

Branchburg Township is blessed with a massive array of public land along the Raritan River that forms an almost continuous publicly-owned greenway extending the length of the Township. Along this route, a number of roadways, both County and Township, have the ability to accommodate bike lanes and create connectivity among neighborhoods and the activity centers of the Township.

The purpose of this Riverwalk Plan is to identify key activity centers, including schools, civic uses, parks, open space, retail and commercial service areas and public transportation facilities, among others. The plan calls for a “Riverwalk”, which will be a unifying element among the existing and proposed pedestrian and bicycle paths that will link the Township’s neighborhoods and activity centers, reducing the need for motorized travel. The plan also sets out an implementation strategy and identifies potential funding opportunities.

## **PURPOSE STATEMENT**

The proposed Bicycle and Pedestrian plan presents an opportunity to reduce auto dependence through linkage of activity centers by means of alternative transportation, consistent with smart growth principles. Bike and pedestrian planning and bicycle and pedestrian improvement plans are examples of smart growth planning.

The New Jersey Office of Smart Growth details a number of Smart growth principles on their website including:<sup>1</sup>

- mixed land uses
- compact, clustered community design
- range of housing choice and opportunity
- walkable neighborhoods
- distinctive, attractive communities offering a sense of place
- open space, farmland, and scenic resource preservation
- future development strengthened and directed to existing communities
- using existing infrastructure
- transportation option variety
- predictable, fair and cost-effective development decisions
- community and stakeholder collaboration in development decision-making

Branchburg’s Riverwalk bicycle and pedestrian plan will promote transportation variety and reinforce Branchburg’s sense of place. A well planned bicycle and pedestrian system will reduce auto dependence and help define a sense of community that is reinforced through the personal experience of moving through the landscape. It will also reinforce Branchburg’s sense of place by linking community activity centers and the green

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<sup>1</sup> New Jersey Department of Community Affairs, Office of Smart Growth Website - <http://www.state.nj.us/dca/osg/smart/index.shtml>

infrastructure of parks, open spaces and other protected lands.

## **IMPORTANCE OF PEDESTRIAN AND BICYCLE ACCESS<sup>2</sup>**

The positive consequences of walking and biking as a healthy mode of transportation, or as a purely recreational activity, span across many aspects of our lives. They promote the health of the environment (and resulting health of all living things), as well as the health of individuals who are more physically active. A transportation system conducive to walking and cycling can reap many benefits in terms of reduced traffic congestion and improved quality of life. Economic rewards both to the individual and to society are also realized through reduced health care costs and reduced dependency on auto ownership (and the resulting insurance and maintenance costs). Other economic benefits of bicycling and walking are more difficult to measure, such as the increased economic vitality of communities that have emphasized bicycle and pedestrian mobility. Finally, walkable communities create a more equitable society that provides transportation choice for all citizens.

## **REGIONAL SETTING**

Branchburg Township is located in the northwestern portion of Somerset County, bordering Hunterdon County to the west (Figure 1). The Township's eastern and southerly boundary runs along the North and South Branch of the Raritan River which provides a green spine for the entire Township and allows access to a variety of recreational opportunities to residents and visitors alike.

## **GOALS AND OBJECTIVES**

Creating a safe, user-friendly and interconnected pedestrian and bicycle plan network has long been a goal of Branchburg Township. Providing a diversification of alternative transportation choices offer residents the ability to make healthy and environmentally friendly lifestyle choices, while reducing traffic congestion and other associated problems.

### **2006 Master Plan Reexamination**

The 2006 Master Plan Reexamination identified the need to create a linked hike and bike system that would connect the densely populated portions of the township with the recreation facilities along the river. In particular the reexamination stated:

“Branchburg is planning, with the aid of a Somerset County planning grant, for a bike and hike trail spanning the length of the greenway corridor and connecting preserved open spaces with the Township's residential neighborhoods. Conceived as a scenic and recreational asset for Branchburg residents with eco-tourism appeal, Riverwalk can serve as a potential linkage among other regional

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<sup>2</sup> National Pedestrian and Bicycle Information Center

greenways. This plan should be developed with an eye toward safety, connectivity and ecotourism.”

## **Goals and Objectives**

Branchburg’s pedestrian and bicycle system is intended to achieve quality of life improvements by advancing the following goals:

**Cultural Environment.** Enhance the human scale and livability of Branchburg neighborhoods by improving opportunities for pedestrian and bicycle activity in neighborhoods, downtowns, villages and rural landscapes.

**Economic Vitality.** Enhance Branchburg’s economic vitality by making commercial districts more attractive and accessible, providing greater transportation efficiency and choice, and improving tourism activities that are created by better pedestrian and bicycle transportation options.

**Health.** Improve the health of Branchburg citizens and reduce health care costs by making it easy and convenient for citizens to be more physically active by walking and bicycling on a regular basis.

**Natural Environment.** Improve environmental quality by increasing the number of pedestrian and bicycle trips and reducing motor vehicle emissions.

**Safety.** Improve and promote the safety of pedestrian and bicycle travel throughout the entire roadway, sidewalk, shared use path, and rail-trail network in Branchburg.

**Transportation Choice.** Enhance pedestrian and bicycle transportation so that citizens, regardless of location or socioeconomic status, can choose a convenient and comfortable mode that meets their needs. Promote a transportation network that facilitates the ability for pedestrians and bicyclists to connect to other modes.

## **BACKGROUND**

### **Federal Legislation**

The Bicycle & Pedestrian Program of the Federal Highway Administration's Office of Human and Natural Environment, promotes bicycle and pedestrian transportation accessibility, use, and safety. Each State has a Bicycle and Pedestrian Coordinator in its State Department of Transportation to promote and facilitate the increased use of nonmotorized transportation, including developing facilities for the use of pedestrians and bicyclists and public educational, promotional, and safety programs for using such facilities.

The FHWA Bicycle & Pedestrian Program issues guidance and is responsible for overseeing that requirements in legislation are understood and met by the States and other implementing agencies.

**Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU)**

On August 10, 2005, the President signed into law the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), which guaranteed funding for highways, highway safety, and public transportation. The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) and the Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21) shaped the highway program to meet the Nation's changing transportation needs. SAFETEA-LU builds on these bills, supplying the funds and refining the programmatic framework for investments needed to maintain and grow vital transportation infrastructure.

SAFETEA-LU goal is to improve safety, reduce traffic congestion, improve efficiency in freight movement, increasing intermodal connectivity, and protecting the environment. SAFETEA-LU promotes more efficient and effective Federal surface transportation programs by focusing on transportation issues of national significance, while giving State and local transportation decision makers more flexibility for solving transportation problems in their communities.

SAFETEA-LU continues a strong fundamental core formula program emphasis coupled with targeted investment, featuring:

*Safety* – SAFETEA-LU establishes a new core Highway Safety Improvement Program that is structured and funded to make significant progress in reducing highway fatalities. It creates a positive agenda for increased safety on our highways by almost doubling the funds for infrastructure safety and requiring strategic highway safety planning, focusing on results. Other programs target specific areas of concern, such as work zones, older drivers, and pedestrians, including children walking to school, further reflect SAFETEA-LU's focus on safety.

*Environmental Stewardship* – SAFETEA-LU retains and increases funding for environmental programs of TEA-21, and adds new programs focused on the environment, including a pilot program for non-motorized transportation and Safe Routes to School. SAFETEA-LU also includes significant new environmental requirements for the Statewide and Metropolitan Planning process.

**New Jersey Department of Transportation: Transportation Choices 2025**

The NJDOT has a statutory requirement to prepare a new State Transportation Plan every five years. The most recent of these is the Transportation Choices 2025.

Transportation Choices 2025 is both a process and a plan. It uses dynamic and interactive tools, including a web site, to involve the public in updating New Jersey's last long-range transportation plan, which was produced in July 1995 (Transportation Choices 2025). The updated plan sets forth transportation policies, strategies, and programs to guide New Jersey's transportation agencies for the next twenty-five years. The New Jersey Department of Transportation and NJ Transit, working closely with other state transportation organizations, regional agencies, and the public, developed the plan.

Transportation Choices 2025 is designed to:

- Update the state's vision, goals and objectives for its transportation system,
- Highlight current areas of concern,
- Anticipate future problems,
- Develop strategies to address both current and future problems and
- Provide New Jerseyans with the best transportation system possible.

In addressing the role of municipal governments, the Plan sets the following goals for 2010:

1. Building 2,000 miles of bicycle paths
2. Empowering counties so they can coordinate and expand community-based transit services
3. Working with communities to create “transit villages” around rail stations that will maximize existing transportation services

Township efforts to establish bicycle routes coincide with the goal of Transportation Choices 2025 for municipalities. Somerset County already has evaluated the bicycle compatibility of roadways in the County, State and federal highway system. As Branchburg continues to develop a comprehensive bicycle route system within the Township, these efforts should be coordinated with efforts of neighboring communities, the County, NJTPA and the State.

### **Somerset County Parks, Recreation and Open Space Master Plan 2000**

#### Goals and Objectives

Somerset County recently revised the goals and objectives set forth in the Somerset County Parks, Recreation and Open Space Master Plan of 1994 in order to reevaluate the previous goals and make changes and additions where necessary. The following is a summary of the current goals and objectives from Somerset County Parks, Recreation and Open Space Master Plan Update.

1. *Create an open space system preserving lands of countywide significance* by preserving highly scenic lands that can be used for a wide range of outdoor passive recreation, particularly along the North and South Branches of the Raritan River, the Passaic River and the Great Swamp are a high priority. Unusual geological, botanical, cultural or historical qualities are also a priority for preservation, and the County plans to

maintain contiguous tracts of open space by partnering with neighboring counties to achieve congruity throughout the region.

2. *Preserve open space to protect critical environmental resources of Somerset County, including flood plains, stream corridors, steep slopes, wetlands, fish and wildlife habitats, major woodlands and water supplies, with the highest priority on permanent protection of all hydrological systems to assure water quality and quantity. Flood plains and regions are also a protection priority as development in flood regions continues to increase. Finally, the County intends to further its efforts and adopt a holistic Watershed Management approach that is more in tune with preserving ecosystem health and takes a larger role in the stewardship of the resources in the County.*
3. *Provide open space for a diverse mix of quality recreational experiences appropriate for a County Park system by focusing open space for passive recreational activities in areas rich in regional character or natural resources or other areas where they can provide additional resources such as outdoor education. Partnering with more non-profit and private organizations to increase facilities and land acquisitions is suggested to limit costs to the public.*
4. *Provide County parks where they will most easily serve the greatest population concentrations in Somerset County by highlighting for preservation those parcels that meet the other objectives and are located to provide better accessibility, and that offer greenways, bike or walking paths and other connecting features. Economic revival and redevelopment of older portions of the County can be enhanced by additional recreation and mobility options to increase non-vehicular traffic in overlooked recreational destination areas.*
5. *Provide open space, which enhances the quality of life in Somerset County by preserving open space in proximity to neighborhoods, enhancing their quality of life and feeling of well being. Open space offers attractive living environments, preservation of agricultural lands and “breathing spaces” to the community. The County seeks to contribute and create more spaces that maintain a high quality of life and contribute to Somerset County’s unique identity.*

### Greenways

Greenways are an important goal for the County. Greenways provide open space links to various natural areas throughout the County. County greenways in Branchburg would follow the North and South Branch of the Raritan River as well as along the stream corridor north of Woodfern Farm. The County Plan also encourages local committees to develop greenways throughout their municipalities.

## **Somerset County Circulation Plan**

The 2001 update of the County Circulation Plan reviews County transportation planning efforts since 1994. It includes - background data on the circulation system in the County and factors that influence transportation (employment and residential growth). In addition, it provides a listing of other planning studies and plans undertaken by the County since 1994, which included:

1. Somerset County Municipal Circulation Element Review Study – The purpose of this effort was to review the circulation elements of the County’s 21 municipalities. It identified deficiencies in many elements such as a lack of addressing bicycling, transit and inter-municipal issues.
2. Somerset County Traffic Calming Study – The purpose of this effort was to demonstrate how traffic calming (physical design of roadways) can control vehicular speed, the dominance of cars, reduce the volume of through traffic and overall driving behavior.
3. Somerset County Sidewalk Inventory and Pedestrian Plan – This study included a complete inventory of sidewalk location and conditions along county roads. It mapped pedestrian generators and it made recommendations for improvements.
4. Somerset County Goods Movement Study – This effort was an attempt to understand the role that goods movement plays in the County’s economy. It involved a survey of numerous County businesses and how they move and receive product.
5. Somerset County Route 22 Transit Enhancement Plan Study – This was a plan for a 12-mile section of Route 22 extending from Green Brook to Watchung.
6. Somerset County Transportation Public and Private Partnership Handbook – The handbook was developed to encourage a better understanding of the complex issues affecting partnerships in transportation and foster appropriate action to meet the County’s growing transportation needs.
7. Regional Center Route 22 Sustainable Corridor Plan Access and Mobility – In conjunction with the Regional Center Partnership the County undertook a study to determine the feasibility of transforming Route 22 into a suburban boulevard.
8. Brownfield Redevelopment Technical Study: Improving Access and Mobility Opportunities for Redevelopment and Community Revitalization – This study was to determine the transportation needs of a pilot Brownfields site. It involved an assessment, improvement recommendations and financing options.
9. Somerset County Annual Six Year Capital Programming Handbook – This document was developed to help prioritize the County’s

transportation needs. The County established a process to program transportation improvement needs (roads and bridges).

**EXISTING CONDITIONS**

The majority of sidewalks in Branchburg are found in the central portion of the Township, home to the Township’s more dense suburban residential development. Sidewalks are often found within subdivisions with few sidewalks extending out onto connecting roadways (Figure 2). These sidewalks often create a discontinuous path from residential neighborhoods to points of activity centers such as schools, community facilities and recreational areas. The following section highlights the existing roadway and sidewalk conditions in order to evaluate potential sidewalk and bikeway extension areas and future linkages.

**Existing Roadway Conditions**

Current roadway conditions play an important role in determining the accessibility and appropriateness of walkway and bikeway implementation. Roadways that handle a high volume of traffic at higher speeds are not suited for non-motorized modes of travel. However, key connections can often be found on less traveled roadways where speed is not as high. The following table identifies the current conditions of State and county roadways in the Township.

**Table 1: State and County Roadway Conditions**

Street Name	Functional Classification	Jurisdiction	Pavement Width (Feet)	Shoulder Width (Feet)	Speed Limit	Traffic Count (AADT)
State Route 202	Urban Principal Arterial	State	24	8	55	38,732
State Route 22	Urban Minor Arterial	State	24	10	55	36,321
Country Route 665 (Lamington Road)	Urban Minor Arterial	County	22	1-4	35	NA
County Route 614 (Easton Turnpike)	Urban Minor Arterial	County	24	5	45-25	NA
County Route 637 (Old York Road)	Urban Minor Arterial	County	39-22	0-8	35-45	NA
County Route 679 (Station Road)	Urban Minor Arterial	County	20	1-3	30-40	NA
County Route 641 (Burnt Mills Rd)	Rural Local	County	20	1	Not Posted	NA
County Route 646 (Chubb Way)	Urban Minor Arterial	County	45	0	Not posted	NA
County Route 629 (Pleasant Run Road)	Rural Minor Collector – Urban Collector	County	22	1-4	Not Posted	1,786
County Route 667 (Elm St, Maple Ave, Pleasant Run Rd)	Urban Local – Rural Local	County	22	1-3	25-40	NA
County Route 606 (Studdiford Drive)	Urban Minor Arterial	County	21	2	Not Posted	NA
County Route 567 (Neshanic Station Road, South Branch Road, Old Your Road)	Urban Collector, Rural Major Collector, Urban Minor Collector	County	20-24	0-6	35-45	3,004-5,741

Functional classification is the process by which streets and highways are grouped into classes, or systems, according to the character of traffic service that they are intended to provide (Figure 3). There are three highway functional classifications: arterial, collector, and local roads. All streets and highways are grouped into one of these classes, depending on the character of the traffic (i.e., local or long distance) and the degree of land access that they allow. These classifications are described in Table 2.

**Table 2: Functional Classification**

<b>Functional System</b>	<b>Services Provided</b>
<b>Arterial</b>	Provides the highest level of service at the greatest speed for the longest uninterrupted distance, with some degree of access control.
<b>Collector</b>	Provides a less highly developed level of service at a lower speed for shorter distances by collecting traffic from local roads and connecting them with arterials.
<b>Local</b>	Consists of all roads not defined as arterials or collectors; primarily provides access to land with little or no through movement.

Jurisdiction identifies the owner or entity with responsibility for the roadway (Figure 4). This includes construction, maintenance and any associated costs. Pavement width identifies the width, in feet, of the driving lanes while shoulder width depicts the width of the shoulder area (Figure 5). Finally, the posted speed limit and traffic count data has also been provided.

### **Existing Sidewalks**

As noted above, sidewalks in Branchburg are concentrated in the central portion of the Township, where traditional residential subdivisions are located. These sidewalks service the immediate residential subdivision but may have few linkages to other portions of the area or Township.

Since most of the sidewalks were constructed in newer residential subdivisions, the sidewalks are primarily in good conditions. However, over time, sidewalks can become uneven and worn by weather, tree upheaval and other such factors.

### **CREATING LINKAGES**

The primary goal of this plan is to identify key linkages throughout Branchburg, where the implementation of a coordinated sidewalk and bicycle plan will result in increase pedestrian and bicycle pathways to allow safe and accessible means of non-motorized transportation.

Improving the safety, functionality, visual character and livability of the Township are also primary goals of this Plan. Traditional suburban development throughout the State has isolated many neighborhoods from pedestrian access to shopping centers, schools and recreational areas, forcing many to drive to such final destinations. Residents living near major corridors often have no way to access destinations on the highway other than by

automobile. Pedestrian and bicycle movements are not accommodated in auto-dependent places, forcing people into their cars, even for a highly walkable destination within a quarter of a mile.

## **PEDESTRIAN AND BIKEWAY CONSIDERATION AND DESIGN**

Creating new sidewalks and other pathways or extending and enhancing the existing network require an analysis of who the user of the pathway is and how the pathway will function. The following section outlines the various type of pedestrian and bicycle paths.

### **Pedestrian and Bikeway Trail Types**

Functional classifications of the various types of walkways and bikeways are important in determining how these pathways will function, what type of transportation will be dominant and whether any associated activities will be required. For example, a walkway may need to be a smooth paved surface that is clearly marked for maximum safety and functionality for all residents. A hiking path is far less formal and only requires minor trail identification and an unpaved surface. Pedestrian and bicycle route types can overlap in terms of usage. According to the Federal Highway Administration, pedestrian and bicycle trails and paths are defined:

***Bicycle Route*** A system of facilities that are used or have a high potential for use by bicyclists or that are designated as such by the jurisdiction having the authority. A series of bicycle facilities may be combined to establish a continuous route and may consist of any or all types of bicycle facilities.

***Bike Lane*** A portion of a highway or street identified by signs and pavement markings as reserved for bicycle use.

***Shared Roadway*** A roadway that is open to both bicycle and motor vehicle travel. This may be an existing roadway, a street with wide curb lanes, or a road with paved shoulders.

***Signed Shared Roadway*** A shared roadway that has been designated by signing as a route for bicycle use.

***Shared-use or Multiuse Path*** A facility physically separated from motorized vehicular traffic within the highway right of way or on an exclusive right of way with minimal crossflow by motor vehicles. It is designed and built primarily for use by bicycles, but is also used by pedestrians, joggers, skaters, wheelchair users (both nonmotorized and motorized), equestrians, and other nonmotorized users.

***Bikeway*** Any road, path, or way which in some manner is specifically designated as being open to bicycle travel, regardless of whether such facilities are designated for the exclusive use of bicycles or are to be shared with other transportation modes.

***Bicycle Path (Bike Path)*** A bikeway physically separated from motorized vehicular traffic by an open space or barrier and either within the highway right-of-way or within an independent right-of-way.

***Bicycle Lane (Bike Lane)*** A portion of a roadway which has been designated by striping, signing and pavement markings for the preferential or exclusive use of bicyclists.

***Bicycle Route (Bike Route)*** A segment of a system of bikeways designated by the jurisdiction having authority with appropriate directional and informational markers, with or without a specific bicycle route number.

***Pedestrian Walkway or Walkway*** A continuous way designated for pedestrians and separated from the through lanes for motor vehicles by space or barrier.

***Sidewalks*** are located within the street right-of-way and are designed for exclusive use by pedestrians, although it is preferred that younger bicyclists use the sidewalk system rather than the road cartway for safety reason. Sidewalks are generally used for non-recreational trips due their proximity to schools, commercial areas, and other similar destinations.

### **Traffic Calming Techniques**

Traffic calming is a relatively new concept, where improvements and management of the roadway system are designed and/or modified to reduce traffic speeds and promote safe pedestrian movements. Increasing in popularity over recent years, particularly as “the new urbanism” has become more popular, traffic calming techniques could be effective in a number of areas in the Township, including the North Branch Hamlet, Neshanic Station and on local roads where traffic may be an impediment to safe pedestrian access. These techniques create a more pedestrian- and bicycle-friendly environment, and protect and enhance historic neighborhoods and protect community character.

In residential areas, traffic calming can be extended to alert motorists that they are entering a shared roadway. When planned over an area, traffic calming generally seeks to divert traffic to roadways designed to handle higher volumes. This in turn enhances the quality of life of residents, while diverting traffic to roads which are best designed to safely and efficiently handle it. The appropriate technique for any given area depends on the physical characteristics of the road, the goal of the designer, and available resources.

Traffic calming techniques can aid residents by providing an opportunity to access services and facilities through non-motorized means. While NJDOT and Somerset County have the ultimate authority over design on State and County Roadways, traffic calming techniques are now widely viewed as a positive way to encourage pedestrian movement and community character. Traffic calming techniques that may be useful in northern Branchburg include; speed tables, raised crosswalks, raised intersections and textured pavements, bike route signage/bike lane designation and in-road pedestrian

crossing signs. Techniques that result in a real or apparent narrowing of pavement width can also help to tame regional through-traffic in areas like North Branch.

### ***Medians***

Medians and refuge islands are forms of traffic calming and pedestrian safety. Medians should be provided as a standard feature of multi-lane suburban highways. Medians allow pedestrians to cross each direction of travel on a highway as a separate movement. Refuge islands should be installed wherever continuous medians cannot be provided, speeds are generally less than 45 mph, and pedestrian volumes are in excess of 100 people per day or where pedestrian accidents, particularly those related to roadway width and crossing time, have occurred.



### ***Crosswalks***

Crosswalks should be installed only where needed. Motorists may lose respect for crosswalks if they encounter them at a large number of areas where they rarely encounter pedestrians. Crosswalks should primarily be considered in these areas:

- All signalized intersections with pedestrian signal heads.
- All locations where a school crossing guard is normally stationed to assist children in crossing the street.
- All locations within ¼ mile of transit stations or schools.
- Situations where a dedicated pedestrian trail crosses a highway at a mid-block location and pedestrian traffic would not otherwise be anticipated.
- All other locations where there is a need to clarify the preferred crossing location when the proper location for a crossing would otherwise be confusing.
- Locations in urban and non-urban areas where development on both sides of a highway result in concentrated pedestrian volumes crossing the highway and there is no highway intersection. For example, where a large parking lot is on the opposite side of the road from a campus or where shopping or eating areas are across the road from workplace areas.

### ***Curb Ramps***

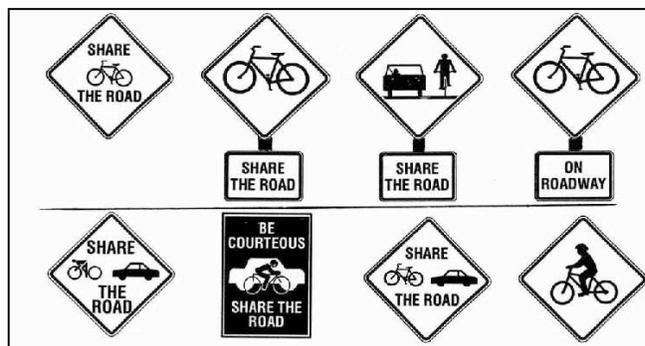
A public sidewalk curb ramp with a level landing shall be provided wherever a public sidewalk or public pedestrian easement crosses a curb or other change in level. Examples of such areas are:

- Intersections
- Painted crosswalks at mid-block locations
- Driveways
- Channelized islands or divisional islands

- Median islands at mid-block locations

### **Signs**

Signs are an example of a low cost improvement that can be beneficial to cyclists, pedestrians, and motorists. “Share the Road” signs are especially useful on shared lanes with speeds of 40mph or greater; shared lanes with limited sight distances; and where shared lanes, demarcated shoulders, or bike lanes end and motor vehicle travel must begin to share the travel lane.



Signage can also be used to alert the motorist to a region where cyclists have facilities with signs such as “lane ahead”. Signage also helps to remind the motorist that where bike lanes exist, that it is not a shoulder, but is for the exclusive use of cyclists. Signs such as “right lane only” accomplish this task.

Signage is also important in areas where on-street parking may be allowed, for instance, in a downtown area. Where bike lanes run past “destinations”, it is important to alert motorists in areas where “no parking” is allowed in the bicycle right-of-way, and signage is critical to reducing motor vehicle and bicycle conflicts. There should be no ambiguity as to the bicycle right-of-way.

### **Design Guidelines**

Most all roadways should have some type of pedestrian and/or bicycle facility. Dedicated sidewalks or bikeways are preferable, but are not be appropriate in all cases. While sidewalks are generally warranted wherever pedestrians are likely to move along the roadway, particular scrutiny should be paid to areas where school children walk to school and the areas around transit facilities.

According to the NJDOT’s [Bicycle Compatible Roadway and Bikeways Planning and Design Guidelines](#), some important design considerations in regard to cyclists include:

- Where possible, provide bicyclists with opportunities, such as ramps, to by-pass physical obstacles; the recommended minimum width for a bicycle pass is 27 inches.
- Where a reduction in roadway width is employed as a speed control measure, careful consideration should be given to how motorists and bicyclists can safely share the remaining space.
- Surface materials, particularly on ramps, should have a good skid resistance, while textured surfaces should not be so rough that they endanger the stability of bicyclists or cause severe grazing if the bicyclist should fall.

- A smooth transition on entry and exit ramps should be provided. Inclines should be clearly indicated and have a gradient of not more than 1:6 (16 percent).
- If the traffic calming feature is to be installed on a road with a gradient, it must be noted that bicyclists are likely to approach it at quite different speeds uphill and downhill. This should be taken into consideration in designing the feature.

According to the Pedestrian Compatible Planning and Design Guidelines, the following are advisable:

- Consider modifications to road standards and subdivision regulations in the direction of current performance standards that are more tuned to functional classification.
- Advocate the separation of pedestrian sidewalks from the roadway by a grass strip at least three feet wide.
- Require construction of sidewalks or walkways along all arterial and collector roads located within 1.5 miles of a school.
- Require developers to extend sidewalks up to 400 feet beyond the boundary of the site to provide for sidewalk continuity.

### **CREATION OF LINKAGES TO ACTIVITY CENTERS**

Activity centers are often described as local and regional destination areas that have intentional end points. These can include recreational, social or community points of interests such as libraries, shopping centers, community facilities and recreational areas. Some activity centers have more than one purpose where multiple tasks can be achieved in one area. Allowing access to these areas without the need for a motor vehicle can reduce congestion, reduce the need for parking and increase the overall well being for those utilizing pedestrian areas.



Activity centers in Branchburg Township (Figure 2) include:

- Post offices
- North Branch Hamlet
- Neshanic Station
- Raritan River Greenway
- Township Elementary and Middle Schools
- Library
- Municipal Complex
- Raritan Valley Community College
- Concentrated shopping areas

Activity centers often transcend municipal boundaries. For example Somerset County's North Branch Park is located across the North Branch Raritan River north of Route 22.

Extending access to larger regional activity centers would expand opportunities for residents to access centers without the need to drive. These neighboring activity centers can be seen on Figure 6.

### **Branchburg Township Recreation Facilities**

There are a variety of recreational opportunities in the Township of which residents would greatly benefit from the ability to reach recreational areas without the use of a vehicle. Township-owned recreation and open space lands, which are shown on Figure 2, are:

- White Oak Park
- Kanach Park
- Old Towne Park
- Marshall Street Park
- Ten Eyck Park
- Brandywine Park
- Champions Run I
- Whiton/Case Road Park
- Station Road
- West County Drive Park
- Holland Brook Road Tract
- Evergreen Drive
- Olive Street Park



### **Somerset County Recreational Opportunities**

Somerset County provides a variety of active and passive recreational opportunities, as well as cultural education areas. These include:

The *North Branch Greenway* is currently being farmed and there are no future plans for the site at this time. The site is located in the northern portion of the Township along the North Branch of the Raritan River.

The *Reeve Tract* contains the Ralph Reeve Cultural Center. Facilities located at this site include the Printmaking Council of New Jersey offices, two exhibition galleries, studios, and classrooms. The Reeve Cultural Center is located south of Route 22 along the North Branch of the Raritan River.

The *North Branch Reserve* is part of a larger park system that extends into Bridgewater Township. The portion of the park located within Branchburg is currently wooded and there are no plans to develop this site for active recreation. The full North Branch Park offers a variety of recreational opportunities including picnic areas, river access, ball fields, horse show rings, pavilions, skating rink, basketball court and other recreational events. The park is located along the North Branch of the Raritan River north of Route 202.

The *South Branch Reserve* is currently being developed to build the Neshanic Valley Golf Course. The site is located along the South Branch of the Raritan River south of Route 567. The Township leases approximately 18 acres of Block 77, Lot 27.02.

The *South Branch Greenway* is currently being farmed with no plans for development. The site is located in a floodplain along the South Branch of the Raritan River.

### **State Recreational Opportunities**

The Confluence Reservoir holdings totaling 502 acres, spans the broad floodplain of the Raritan River Branches in Branchburg, Hillsborough and Bridgewater. This area, where the North Branch and South Branch of the Raritan River join, was once proposed to become an impoundment to collect water that would be pumped to Round Valley Reservoir. At the present time, the State is not pursuing the reservoir and the area functions as a rural, scenic meadow.

### **Other Regional Activity Centers**

#### *Adjacent Municipalities*

Open Space and recreation areas are located along the boundary in Branchburg in neighboring municipalities. These include the Raritan River Greenway Park to the east on in Bridgewater and Hillsborough and open space areas to the north in Bedminster. Connecting these recreational opportunities will not only benefit Branchburg residents but also make additional resources available for neighboring municipalities.

Along the southeastern portion of the Township, Hillsborough Township has an area that juts in along river road creating an area that could provide for a pedestrian path from connecting two areas of Branchburg through Hillsborough Township. This would also help to form a pathway with Hillsborough. Currently Hillsborough is interested in investigating a greenway throughout Hillsborough but has not yet begun a formal investigation. They did however note that there are some possibilities in preserving land in the area and may eventually all link to a municipal and regional greenway system. Branchburg would encourage any regional efforts to expand pedestrian or bikeway paths.

Somerset County is currently developing a regional pedestrian/bicycle/greenway system within the Somerset Regional Center.

## **PROJECT AREAS**

### **Riverwalk Hike/Bike Plan**

The Riverwalk bicycle and pedestrian path is designed to serve residents of Branchburg

and Somerset County on a number of levels (Figure 7). It will provide an alternative means of transportation, connecting the activity centers and neighborhoods of the Township. Multi-modal connections to transit are possible with North Branch Station on the Raritan Valley Line situated along the proposed route. It also provides smaller loops of recreation access, which connect neighborhoods with the open space and natural resources that exist along the river. Thus, these regional resources will be afforded enhanced access by the proposed project.

First proposed and investigated in 2004 as part of a grant submission to NJDOT for a Transportation Enhancement Program Grant opportunity, the proposed route for Riverwalk (see Figure 7) was endorsed by the Branchburg Township Planning Board and Township Committee. While the funding application was initially denied by NJDOT, the Township has continued to promote and encourage the development of the proposed path and may apply for aid from State and County sources in the future

Riverwalk seeks to implement a pedestrian and bicycle system that connects residential neighborhoods and activity centers with the existing recreational system along the North and South Branches of the Raritan River, with a total of over 17 miles of pedestrian and bicycle paths. It will also connect activity centers within the community; the villages of Neshanic Station and North Branch will be connected to the developed core of the Township, which surrounds the Route 202 corridor.

Riverwalk will link existing neighborhoods and activity centers within the Township and eventually, within the region. The location of the proposed path has the potential to decrease automotive dependence regionally and locally, and promote human health.

North Branch Station (NJ Transit Raritan Valley Line) is located on River Road along the proposed walking/bike system. While transit users will generally only walk 1/4 to 1/2 mile from home to a transit station, the Raritan Valley Line could be used to provide better access to destinations along the Route 202 and Route 22 corridors, as well as to other critical destinations. One such destination is RVCC, roughly 1.4 miles from North Branch Station along the proposed route.

The quality of life benefits from Riverwalk are numerous, and will be tangible for Branchburg and Somerset County, as well as neighboring towns. The project will highlight and increase enjoyment of the natural resources and open space along the North and South Branches of the Raritan River by providing direct access to these riparian areas.

### **Fox Hollow/North Branch Connection**

The Fox Hollow neighborhood, located to the north west of the North Branch Hamlet is another area in need of adequate and safe means of



pedestrian access to local and regional activity centers. As seen on Figure 9, this residential neighborhood contains sidewalks within the development, however linkages to larger routes and activity centers do not exist. The residents of this neighborhood, who are within a close proximity to the North Branch Hamlet, would greatly benefit from a pedestrian means of access to the educational, shopping and recreational opportunities so close to their homes along Old Route 28.

The Fox Hollow neighborhood, as stated previously, is currently lacking pedestrian access outside of the developed neighborhood. One means to achieve access to North Branch would be to create a pedestrian path along Lamington Road from Fox Hollow to Route 28, Easton Turnpike, although existing sidewalks along Route 28 are currently not contiguous. Segments of sidewalks or pedestrian paths will be needed to provide a continuous bike and pedestrian circulation system.

### **Old Towne/NJ Transit Connector**

At present, there is no walkable route between the North Branch transit station and Old Towne, Branchburg's largest suburban neighborhood. Figure 9 illustrates a future pedestrian and bicycle pathway linking this neighborhood with the transit system, which offers connections to major employment destination throughout the region.

The Old Towne/NJ Transit connection also provides a direct connection from Old Towne to the Riverwalk, and offers safer and better linkages among the neighborhoods of northern Branchburg.

## **PROJECT AREA IMPLEMENTATION**

### **Riverwalk Proposed Phases**

Riverwalk (Figure 8) will be a phased project that will establish a Township-wide bicycle and pedestrian system, and is divided into four (4) phases as noted below.

#### ***Phase I***

Phase I will provide a continuous pedestrian and bicycle route from the evolving rail trail in Neshanic Station (in southern Branchburg) to Raritan Valley Community College. This phase begins in Neshanic Station and runs north along South Branch Road (Country Route 567) to Old York Road. The path continues east along Old York Road to River Road. At River Road the path extends north to Station Road (County Route 679) and continues north to Easton Turnpike (old Route 28), before turning west to Route 637 in North Branch Hamlet.

This phase would consist of approximately 9 miles and create the major spine of the Riverwalk Path. The majority of this phase is located on county and state roads which have limited paved shoulder width. Treatments to create a pedestrian and bicycle area include striping on the road and signage to provide a visual marker of a shared roadway.

Additionally, some design and grading may be required in order to allow for adequate pedestrian and bicycle movement.

### ***Phase II***

Phase II of the bicycle and pedestrian system proposes the addition of a number of off-road segments, as well as the addition of one segment of on-road improvements. The on-road improvements on Opie Road, a portion of which runs through Hillsborough Township, will connect to off-road improvements at the Neshanic Valley Golf Course, operated by the Somerset County Park Commission. It should be noted that the Park Commission planned for a passive recreation park along the river and has indicated that the proposed path location is consistent with their plans. Additional off-road portions of the trail on public property will also be constructed during this Phase.

Off road improvements will require clearing and grading of the trail area as well as possible paving or laying of gravel or other material for a consistent walkway and bicycle areas. Signage for clear directional wayfinding will also be necessary in this phase. The overall purpose for this phase will be to add a recreational element to the Riverwalk where people can enjoy the Raritan River Greenway.

Since the creation of the initial Riverwalk concept, construction has occurred in the North Branch Section of Phase II. Easton Turnpike has undergone construction activity that has greatly reduced the lane width and subsequently removed any usable shoulder area. This may require an alternate path to be found to access the Riverwalk in this area.

### ***Phase III***

Phase III of the proposed bicycle and pedestrian system (Figure 8) incorporate off-road portions in the floodplain of the river. One segment is on public property along the South Branch of the Raritan River, extending past the confluence of the North and South Branches, south of Old York Road. Other proposed segments will extend from south of Route 22 to future open space that will be dedicated to the Township in the next few years.

### ***Phase IV***

Phase IV of the project will seek to create loops of pedestrian and bicycle paths that will connect the residential central portions of the Township with the main spine of the Riverwalk. These additions will be of the most benefit to local residents and will provide transportation alternatives throughout the Township.

Implementation of this phase will require a variety of methods including signage, striping, construction of sidewalks or path areas and other items to make the routes safe and accessible.

## **FUNDING OPPORTUNITIES**

Communities can apply for funding through State, Federal, local and non-profit sources. Listed below are a sample of funding sources that offer support to communities for projects to enhance community bicycle and pedestrian facilities.

### **State Funding Sources**

#### **Safe Routes to School (NJDOT)**

This funding allows a community to develop and implement a bicycle and walking plan for routes that encourage walking and biking to schools safely. Safe Routes to School (SRTS) is a federal, state and local effort to enable and encourage children, including those with disabilities, to walk and bicycle to school.

The goal of New Jersey's Safe Routes to School Program is to assist New Jersey communities in developing and implementing projects and programs that encourage walking and bicycling to school while enhancing the safety of these trips. A major goal of the program is to increase bicycle, pedestrian and traffic safety. Successful Safe Routes to School programs in the United States usually includes engineering, enforcement, education, or encouragement.

#### **NJ Highway Traffic Safety Grant**

This grant is typically used for education and enforcement programs, but has also been used for engineering efforts, such as signing and striping. Bike and pedestrian advocates, as well as police departments and Safe Routes to School coordinators can also apply for funding through this program. The issues addressed in this program must be justified using crash data, accident data, etc.

#### **The Pedestrian Safety Corridor Program**

This program is an initiative to identify and remediate highway corridors in the state with the greatest pedestrian safety problems. Corridors are chosen based on crash history and other identified pedestrian safety issues. The program involves assembling a Pedestrian Safety Impact Team consisting of 30-40 stakeholders, including government and elected officials, traffic engineers, planners, business owners, local residents, and representatives from civic groups. The team receives classroom training on pedestrian-related planning, design, education, and enforcement issues and then completes fieldwork, studying the corridor and recommending improvements.

#### **The Division of Highway Traffic Safety**

The Division offers grants for pedestrian safety education and enforcement, as well as small scale engineering treatments, such as striping and signage. So far this year, the Division has issued approximately 30 State and Community Highway Safety Program grants to police departments to enhance pedestrian safety efforts.

### **National Recreational Trails Program**

NJDEP provides financial assistance for developing and maintaining trails and trail

facilities for non-motorized, motorized and multi-use purposes. The maximum grant award is \$25,000, and projects are funded on an 80% federal share and 20% matching share basis.

### **Other Potential Funding Sources**

Non-profit organizations and transportation groups are other funding sources that can contribute to the creation, enhancement or assistance to pedestrian and bicycle paths. While these funds may be limited they can add to existing funding or provide a necessary jumping off point for further issues. Organizations such as Ridewise, an organization which provides a variety of transportation and commuting options, occasionally provide small grant opportunities to the enhancement of pedestrian and bicycle opportunities.

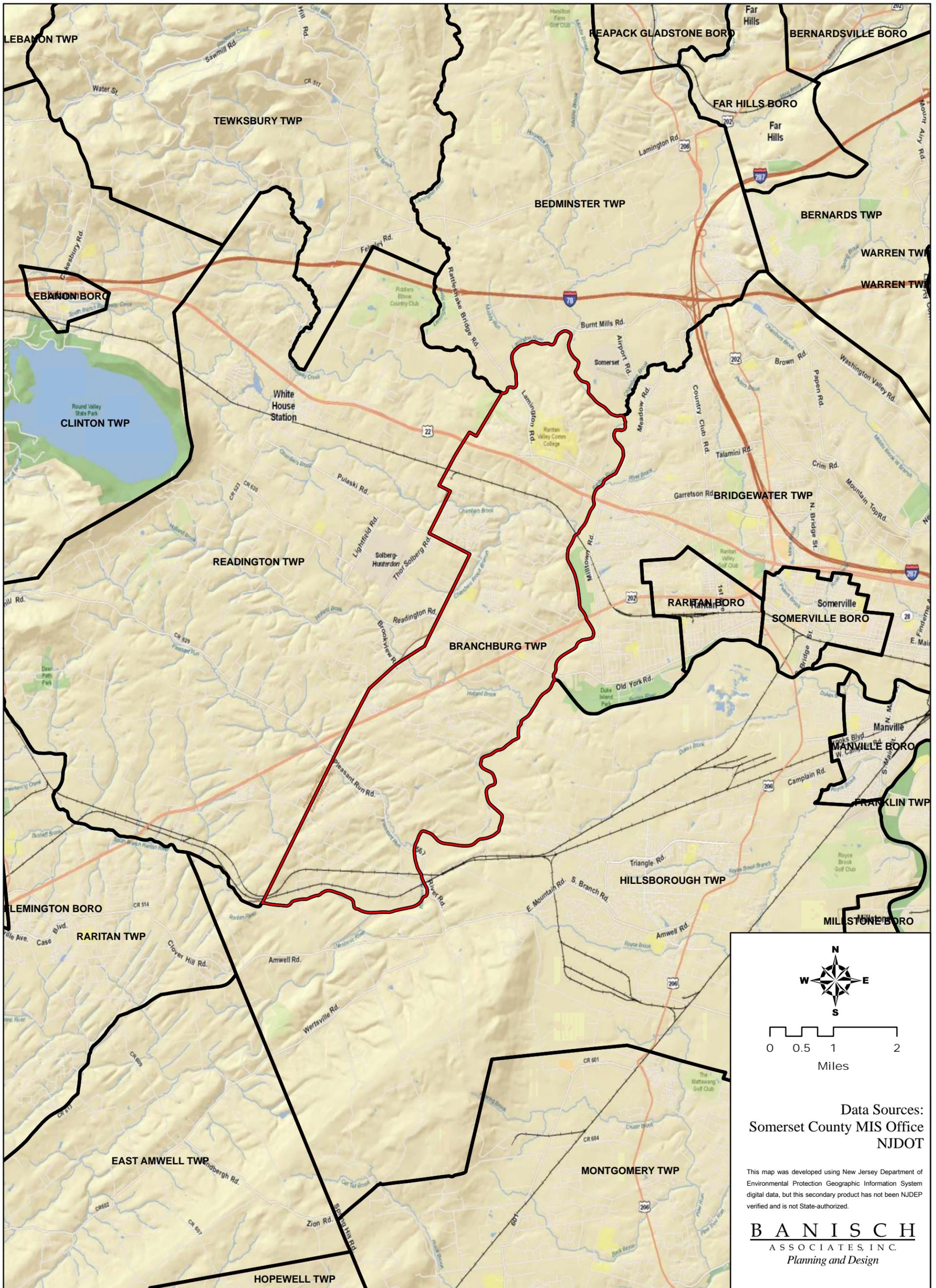
Other options for funding may include partnering with neighboring municipalities as a way to develop intra-municipal and larger regional connections. This type of partnership not only benefits the Township but also the region by promoting regional awareness and healthy lifestyles to a larger population base.

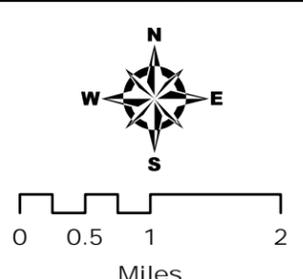
### **CONCLUSIONS**

Branchburg Township spans a broad geographic range that is anchored on the north and south by the historic settlements of North Branch and Neshanic Station. An elaborate array of suburban residential neighborhoods of different vintages has developed, largely since World War II, to fill out the broad middle section of the Township. Sidewalks provided in these neighborhoods are the core existing elements in this plan, which seeks to better connect older and newer neighborhoods with the open spaces and activity centers found throughout the Township.

Riverwalk celebrates Branchburg's intimate setting along the Raritan River and a long history as a riverside community. The Township's historic districts will be linked by Riverwalk through the vast greenway of protected open spaces along the river. Offering a multitude of outdoor experiences, Riverwalk will serve to maintain and improve the desirable quality of life in Branchburg that has attracted residents for generations.

Figure 1:  
 Pedestrian and Bikeway Plan  
 Regional Location  
 Branchburg Township, Somerset County  
 February 2008

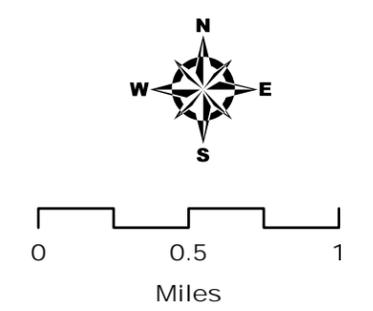


  
 Data Sources:  
 Somerset County MIS Office  
 NJDOT  
 This map was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been NJDEP verified and is not State-authorized.  
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 Planning and Design

# Figure 2 : Pedestrian and Bikeway Plan Activity Centers and Existing Sidewalks Branchburg Township, Somerset County February 2008

## Legend

-  Library
-  Municipal Building
-  Post Office
-  School
-  Shopping
-  Train Station
-  County Parkland and Open Space
-  Municipal Parkland and Open Space
-  Other Municipally Owned Land
-  State Parkland and Open Space
-  Existing Sidewalks



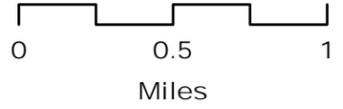
Data Sources:  
Somerset County MIS Office  
NJDOT

This map was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been NJDEP verified and is not State-authorized.

Figure 3:  
 Pedestrian and Bikeway Plan  
 Roadway Functional Classification  
 Branchburg Township, Somerset County  
 February 2008

Legend

- Local Road
- Rural Local
- X-X Rural Minor Collector to Urban Collector
- Urban Collector to Rural Major Collector to Urban Minor Arterial
- ▲▲▲ Urban Local to Rural Local
- - - Urban Minor Arterial
- Urban Principal Arterial



Data Sources:  
 Somerset County MIS Office  
 NJDOT

This map was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been NJDEP verified and is not State-authorized.

Figure 4:  
 Pedestrian and Bikeway Plan  
 Roadway Jurisdiction  
 Branchburg Township, Somerset County  
 February 2008

Legend

- Local Road
- - - County
- State



Data Sources:  
 Somerset County MIS Office  
 NJDOT

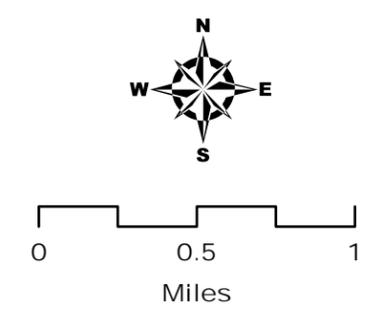
This map was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been NJDEP verified and is not State-authorized.

Figure 5:  
 Pedestrian and Bikeway Plan  
 Shoulder Width  
 Branchburg Township, Somerset County  
 February 2008

Legend

Feet

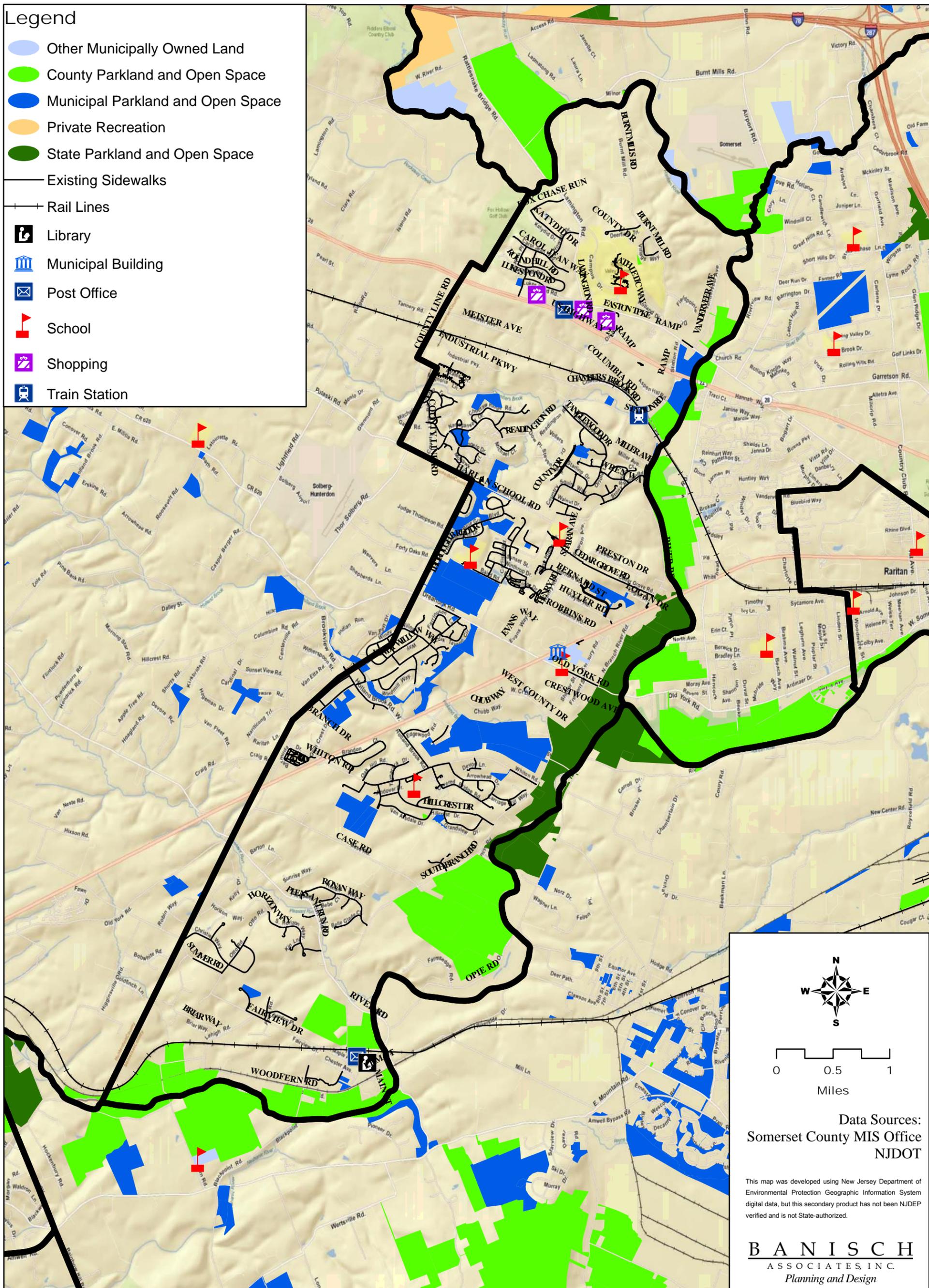
- 0
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- |—|—|— 1
- ▲▲▲▲ 1 to 3
- 1 to 4
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- ×—×— 5
- 8
- 10



Data Sources:  
 Somerset County MIS Office  
 NJDOT

This map was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been NJDEP verified and is not State-authorized.

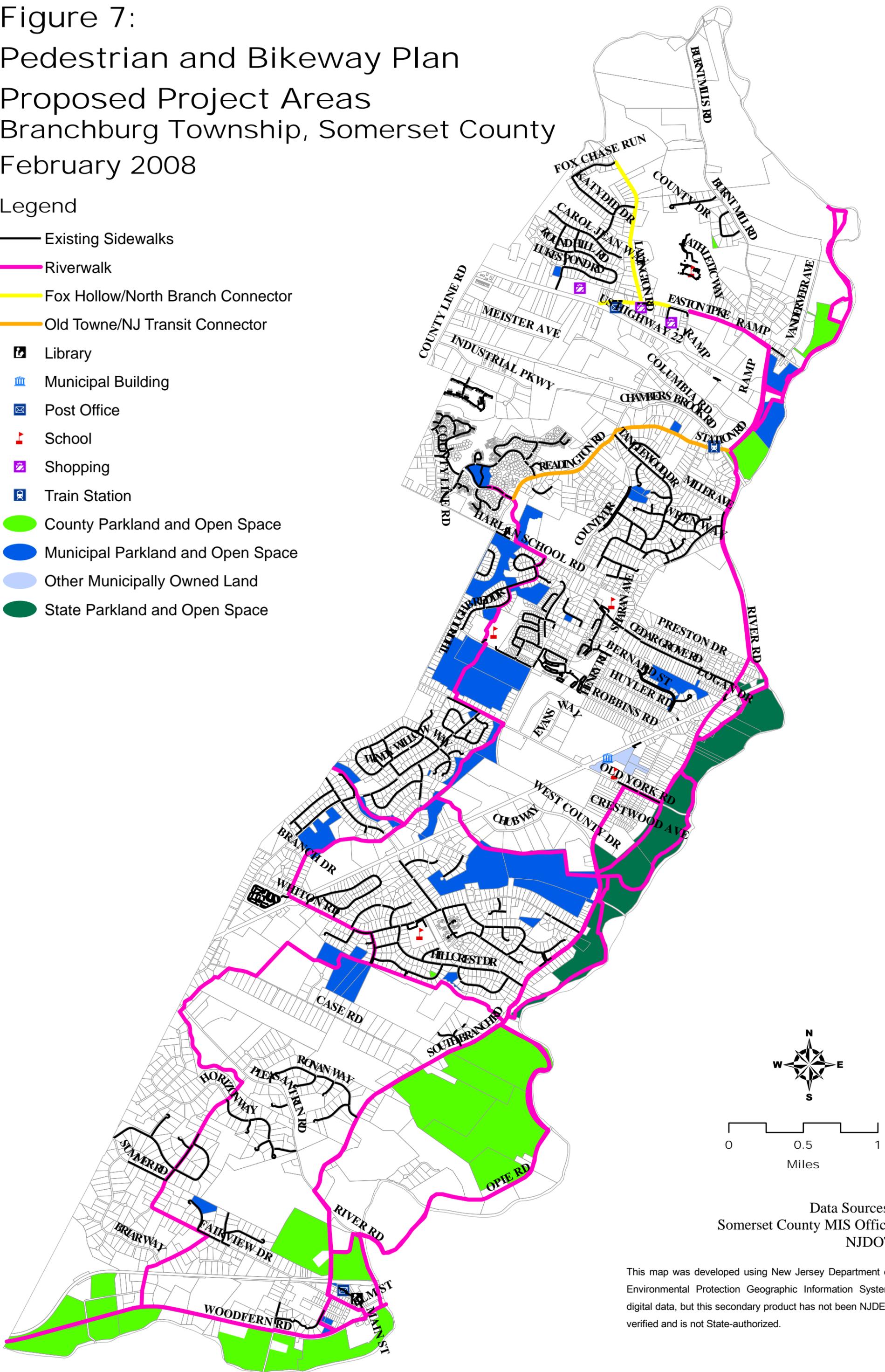
Figure 6:  
 Pedestrian and Bikeway Plan  
 Regional Activity Centers Near Branchburg  
 Branchburg Township, Somerset County  
 February 2008



# Figure 7: Pedestrian and Bikeway Plan Proposed Project Areas Branchburg Township, Somerset County February 2008

## Legend

- Existing Sidewalks
- Riverwalk
- Fox Hollow/North Branch Connector
- Old Towne/NJ Transit Connector
- 📖 Library
- 🏛️ Municipal Building
- ✉️ Post Office
- 🎓 School
- 🛍️ Shopping
- 🚉 Train Station
- 🟢 County Parkland and Open Space
- 🟠 Municipal Parkland and Open Space
- 🟡 Other Municipally Owned Land
- 🟤 State Parkland and Open Space



Data Sources:  
Somerset County MIS Office  
NJDOT

This map was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been NJDEP verified and is not State-authorized.

# Figure 8: Pedestrian and Bikeway Plan Riverwalk Project Area Branchburg Township, Somerset County February 2008

## Legend

— Existing Sidewalks

### Proposed Riverwalk Pedestrian and Bike Paths

— Phase 1

— Phase 2

— Phase 3

— Phase 4



Library



Municipal Building



Post Office



School



Shopping



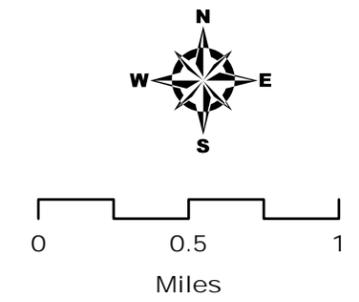
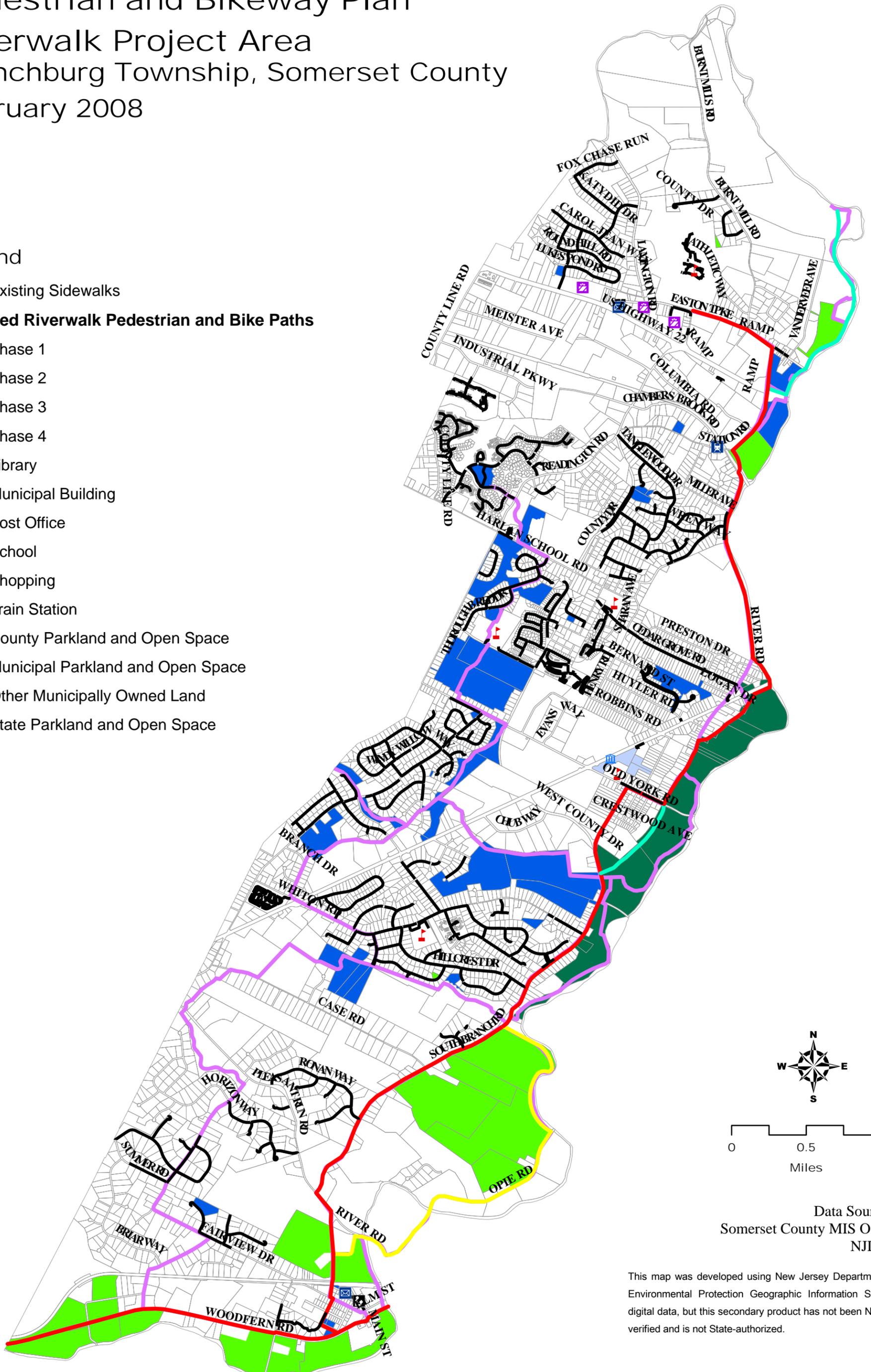
Train Station

County Parkland and Open Space

Municipal Parkland and Open Space

Other Municipally Owned Land

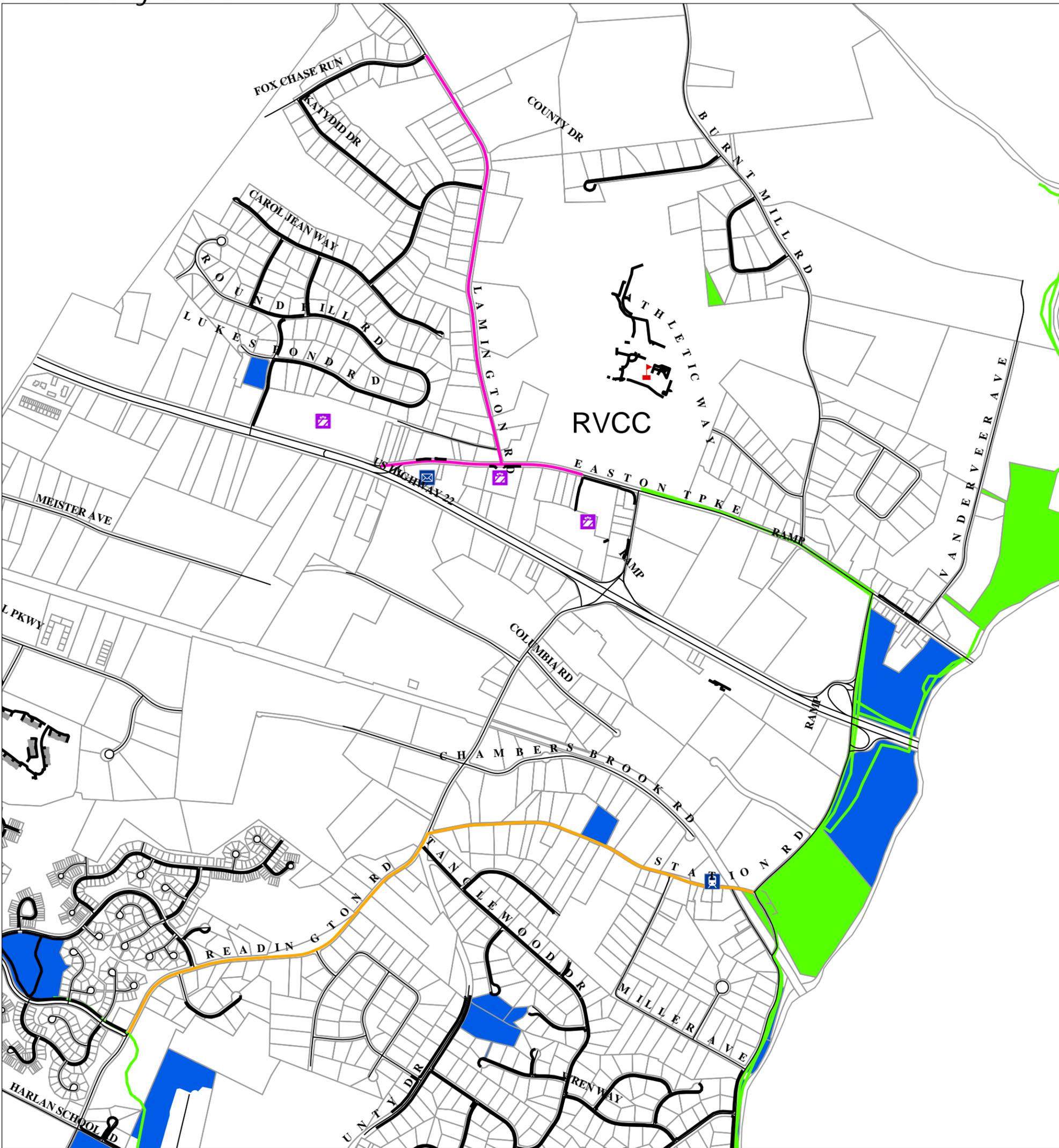
State Parkland and Open Space



Data Sources:  
Somerset County MIS Office  
NJDOT

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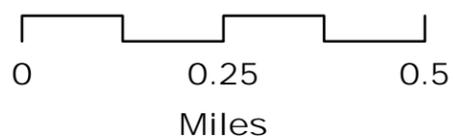
Figure 9:  
 Pedestrian and Bikeway Plan  
 Fox Hollow/North Branch and Old Towne/NJ Transit  
 Proposed Project Areas  
 Branchburg Township, Somerset County  
 February 2008



Legend

- |                                   |                    |
|-----------------------------------|--------------------|
| Existing Sidewalks                | Library            |
| Riverwalk                         | Municipal Building |
| Old Towne/NJ Transit Connector    | Post Office        |
| Fox Hollow/Northbranch Connector  | School             |
| County Parkland and Open Space    | Shopping           |
| Municipal Parkland and Open Space | Train Station      |
| Other Municipally Owned Land      |                    |
| State Parkland and Open Space     |                    |

Data Sources:  
 Somerset County MIS Office  
 NJDOT



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