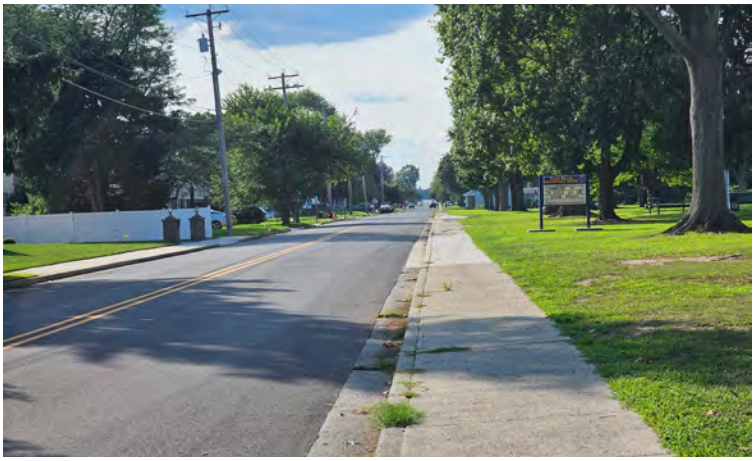
Pennsville Bicycle Network Plan

Pennsville Township
Salem County, NJ
2026











CROSS COUNTY CONNECTION
TRANSPORTATION MANAGEMENT ASSOCIATION

SJTPO
South Jersey Transportation Planning Organization

RUTGERS–NEW BRUNSWICK
Edward J. Bloustein School of Planning and Public Policy
Alan M. Voorhees Transportation Center

SUSTAINABLE JERSEY
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About the Report

This report has been prepared as part of the South Jersey Transportation Planning Organization's (SJTPO) Complete Streets Technical Assistance program with financing by the Federal Transit Administration and the Federal Highway Administration of the U.S. Department of Transportation. This document is disseminated under the sponsorship of the U.S. Department of Transportation in the interest of information exchange. The SJTPO is solely responsible for its contents.

The report was authored by staff at the Alan M. Voorhees Transportation Center (VTC) at Rutgers, The State University of New Jersey, and reviewed by Sustainable Jersey and the SJTPO.

The Alan M. Voorhees Transportation Center

The Alan M. Voorhees Transportation Center (VTC) is a national leader in the research and development of innovative transportation policy. Located within the Edward J. Bloustein School of Planning and Public Policy at Rutgers University, VTC has the full array of resources from a major research university on transportation issues of regional and national significance.

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Cross County Connection Transportation Management Association

Cross County Connection is the designated Transportation Management Association (TMA) for the seven-county southern New Jersey region: Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester and Salem. Cross County Connection assists local governments, schools, businesses, social service organizations, residents and employees with mobility needs by fostering the implementation and use of sustainable transportation modes.

Cross County Connection Transportation Management Association
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Sustainable Jersey

Sustainable Jersey (SJ) is a nonprofit organization that provides tools, training and financial incentives to support communities as they pursue sustainability programs. By supporting community efforts to reduce waste, cut greenhouse gas emissions, and improve environmental equity, Sustainable Jersey is empowering communities to build a better world for future generations.

Sustainable Jersey
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South Jersey Transportation Planning Organization

The South Jersey Transportation Planning Organization (SJTPO) is the Metropolitan Planning Organization (MPO) serving Atlantic, Cape May, Cumberland, and Salem Counties in southern New Jersey. Formed in 1993, SJTPO serves as a technical resource, provides access to funding, and works to provide a regional approach to address transportation planning and engineering issues.

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Executive Summary

The Township of Pennsville, New Jersey, participated in the 2024-2026 South Jersey Transportation Planning Organization (SJTPO) Complete Streets Technical Assistance (CSTA) Program. The SJTPO worked with the Alan M. Voorhees Transportation Center (VTC) at Rutgers, the State University of New Jersey, Sustainable Jersey (SJ), and Cross County Connection Transportation Management Association (CCCTMA) to provide technical assistance to the Township.

Officials and residents are interested in making it safer and easier to walk and bicycle to existing parks, a riverfront trail, and schools. Technical assistance included a study on improving bicycle access between Riverview Beach Park and Fort Mott State Park. Additionally, the project teams looked for opportunities to improve access to the existing river trail and address safety concerns at other locations within Pennsville Township. As part of the study, a temporary demonstration project was installed on Riviera Drive. The project team used the demonstration to gather stakeholder and public input as part of its analysis of safety concerns in the Township.

This report summarizes the implementation of the temporary demonstration and the feedback provided by community members that was collected through an online questionnaire. The collected speed data revealed a successful reduction in vehicular speeds.

Building upon these findings, this report outlines a series of strategic, actionable recommendations for permanent infrastructure improvements, policy adoptions, and network expansions tailored to Pennsville's unique geographic and demographic context. This report primarily calls for improving comfort and safety for all roadway users by building bicycle facilities appropriate to each corridor. Additional recommendations include new pedestrian infrastructure and other safety improvements to reduce speeds and create an overall network for all roadway users.

The lessons learned during the demonstration and roadway analysis can be applied to other roadways in Pennsville. Appendices in the report include outreach materials, temporary demonstration designs, the online questionnaire, and a list of potential funding resources.



Study Overview

The SJTPO launched its Complete Streets Technical Assistance Program (CSTA) in 2024. The project was developed due to the success of a similar program operated in the North Jersey Transportation Planning Authority (NJTPA) region. That program, which began in 2018, has successfully delivered technical assistance to nearly 30 communities. Hearing about the success achieved by that program, communities in the SJTPO region began to ask for similar technical assistance. With only 24 of the 68 municipalities in the SJTPO region having a Complete Streets Policy, the SJTPO program included education and training before offering technical assistance to communities that are not familiar with the benefits. The program additionally developed a Complete Streets Demonstration Library, available free of charge to support communities in southern New Jersey who want to undertake demonstration projects to explore a range of temporary street designs.

Pennsville Township requested technical assistance to include a **Bicycle Network Plan** to identify specific routes and road treatments to improve bicycling infrastructure, as well as consider safety for pedestrians and micromobility users, ultimately creating a safe and attractive bicycle route between Riverview Beach Park and Fort Mott State Park (Figure 1). Over the past few years, the Township has invested in upgrading park facilities, building a new riverfront trail, and promoting Pennsville to visitors. One of the goals for the project is to explore potential road improvements that will encourage more residents to walk, bicycle, or scooter to and from the parks. Existing road conditions vary, from quiet residential roadways to wide, high-speed regional routes. As such, roadway safety is an issue in the study area. Pennsville is concerned about drivers exceeding the speed limit and failing to yield to bicyclists and pedestrians. By creating new bicycle infrastructure between the parks, the Township hopes to increase safety for all and to encourage bicycling by residents and visitors.

The CSTA team met with Pennsville officials to discuss which roadways should be prioritized for study. The CSTA team then looked at existing conditions on a block-by-block basis to determine which safety improvements were feasible.

Additionally, Pennsville was eager to work with the CSTA team on the development and installation of a demonstration project. As part of this project, the team designed and installed painted curb extensions, flexible delineator posts, and high-visibility crosswalks where the existing riverfront trail ends and transitions into the roadway. This allowed residents the opportunity to experience first-hand what changes could look like along a roadway that has remained the same for generations, and to provide feedback via an online questionnaire. Through an analysis of pre- and post-installation speed data, alongside the detailed community questionnaire responses, this report provides a nuanced evaluation of the Riviera Drive demonstration.

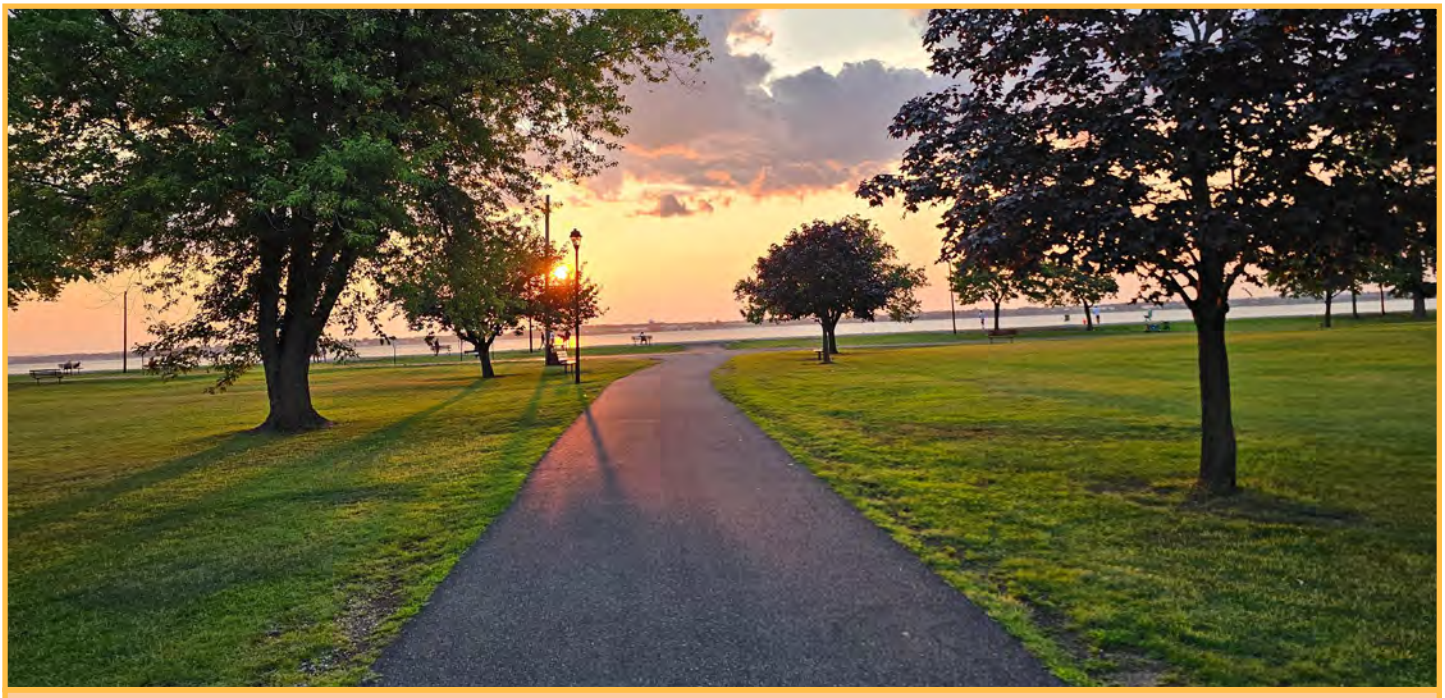


Figure 1. Riverview Beach Park.

What is a Complete & Green Street?

Complete & Green Streets are part of a movement where municipalities, counties, and states adopt policies that require road engineering and design projects to consider the mobility needs of everyone (Figure 2). This includes all roadway users and all travel modes—pedestrians, cyclists, micromobility users, transit users, freight, and travelers of all ages and abilities.

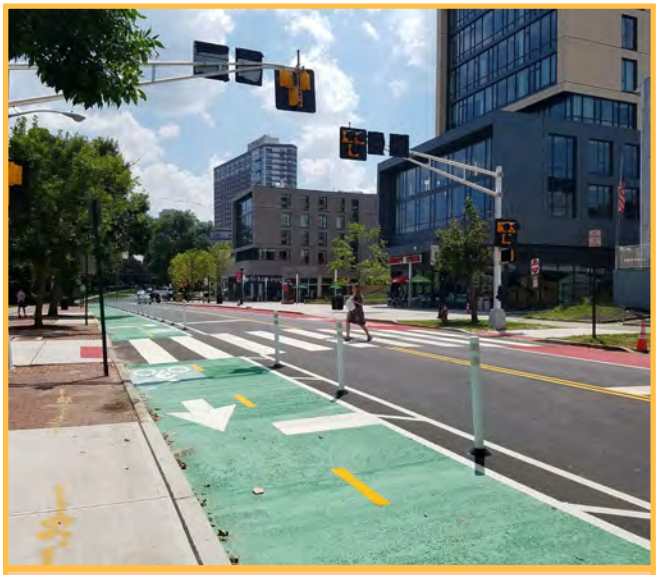


Figure 2. This Complete Street in New Brunswick, NJ, features a bicycle path, bus lane, and enhanced pedestrian crossing.

Section 11206 of the Bipartisan Infrastructure Law (BIL), also known as the Infrastructure Investment and Jobs Act (IIJA) of 2021, defines Complete Streets standards or policies as those which "ensure the safe and adequate accommodation of all users of the transportation system, including pedestrians, bicyclists, public transportation users, children, older individuals with disabilities, motorists, and freight vehicles." This section of the BIL requires that states and MPOs use 2.5 percent of their planning and research funds for Complete Streets activities that will increase safe and accessible transportation options.

Complete Streets should tailor the road to the specific needs of the surrounding environment. A school zone, for instance, may require reduced speed limits, narrower travel lanes, and wider sidewalks to achieve a safer setting for students. Meanwhile, streets along transit routes should incorporate the needs of commuters by installing benches, shelters, lighting, and signs (Figure 2).

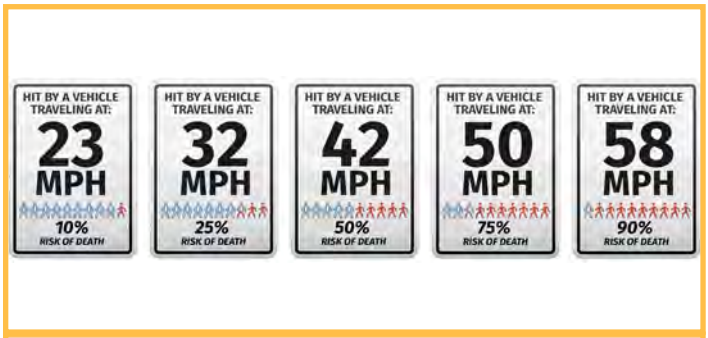


Figure 3. Graphic showing increased fatality rate as vehicle speeds increase. (FHWA)

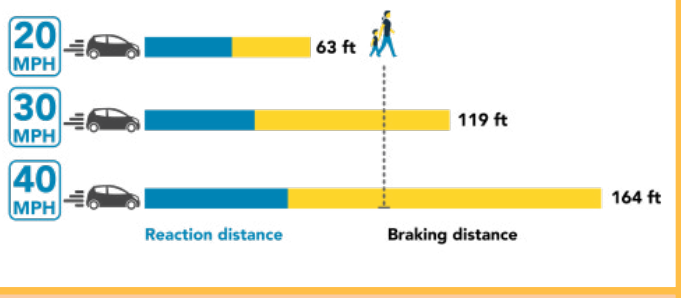


Figure 4. Graphic showing increased stopping distance as vehicle speeds increase. (Vision Zero Network)

Regardless of the context, Complete Streets should be designed to improve safety for pedestrians, bicyclists, and micromobility users who are the most vulnerable road users. Reduced speed limits, raised medians, and other design elements can help create a safer environment for all road users. To put traffic speeds into perspective, a 10-mph reduction in vehicle speed dramatically decreases the chance of pedestrian fatalities in a collision. The U.S. Department of Transportation (USDOT) cites collisions in which pedestrians are struck by a vehicle traveling 42 mph as being fatal 50 percent of the time. Comparatively, at 32 mph, pedestrian fatality rates drop to 25 percent, and at 23 mph they are down to 10 percent (Figure 3 and Figure 4).

Complete Streets is also an implementation strategy of the Safe System Approach, adopted as the guiding principle behind the USDOT National Roadway Safety Strategy, which holds that deaths and serious injuries due to roadway crashes are unacceptable. Transportation agencies implement proactive, redundant systems of safety to prevent crash fatalities and serious injuries. Complete Streets addresses two of the five elements of a Safe System-Safe Roads and Safe Speeds-and advances the proactive implementation of safety infrastructure.

NJDOT is continuing to support the design of Complete Streets throughout the state. The New Jersey Target Zero Commission officially adopted the first New Jersey Target Zero Action Plan in 2025[1]. This plan sets forth actions and strategies to eliminate all traffic fatalities and serious injuries by the year 2040. The Action Plan lists the adoption of Complete Streets as a main strategy for creating safer roads in New Jersey. SJTPO is one of 13 members of the Target Zero Commission, which also includes a representative from NJDOT, State Police, Department of Health, Department of Community Affairs, Motor Vehicle Commission, Department of Human Services, Division of Highway Traffic Safety, Department of Environmental Protection, NJ TRANSIT, New Jersey Turnpike Authority, and fellow MPOs of the Delaware Valley Regional Planning Commission, and NJTPA. Collectively, the goal is to eliminate traffic fatalities and serious injuries on New Jersey's roads by 2040.

The work to reduce and ultimately eliminate roadway deaths requires an all-hands-on-deck approach at all levels. Counties are also hard at work to create safer roads. SJTPO has partnered with Atlantic, Cape May, Cumberland, and Salem Counties to produce Local Road Safety Plans for each county. These plans outline strategies to reduce fatalities and serious injuries on county and municipal roadways[2].

Benefits of Complete & Green Streets

While the primary benefit of Complete Streets is improved safety for all roadway users, there are other positive outcomes. Complete Streets create better places to live, work, and do business.

Public Health

Complete Streets make it possible for people to routinely choose walking, bicycling, and transit to access community destinations such as supermarkets, medical services, and entertainment destinations, leading to greater physical activity and social connectivity. Improving walkability, bikeability, and transit access helps solve urgent public health problems by improving safety and sociability and by reducing air pollution.

Green Streets

Green Streets use green infrastructure practices installed within the public right-of-way to manage stormwater while preserving the primary function of a street as a conduit for vehicles, pedestrians, bicyclists, micromobility users, and transit riders (Figure 5). Green Streets and Complete Streets can complement each other by creating an inviting and comfortable walking and bicycling environment by incorporating green infrastructure elements, such as street trees and rain gardens that provide shade and remove pollutants from the air, while minimizing flooding along streets and sidewalks that interferes with and discourages walking and bicycling.



Figure 5. Green infrastructure used to narrow the roadway and provide a shorter crossing distance for pedestrians.

Economic Vitality

Improving streetscapes can help to strengthen or revitalize business districts. Complete Streets generate more foot traffic when they create great places where people want to be, which can encourage both residents and visitors to spend more money at local shops and restaurants. For example, pedestrianizing Division Street in Somerville, Somerset County, New Jersey attracted new businesses and helped to revitalize a struggling business corridor (Figure 6). The economic benefits also extend to individuals by lowering costs related to car ownership. By walking, biking, and taking transit for more trips, households save money on driving expenses like gasoline, parking, and maintenance, and can choose to own fewer vehicles – or no vehicles at all.



Figure 6. Division Street in Somerville was converted into a popular pedestrian plaza.

1. https://dot.nj.gov/targetzero/pdf/NJ_Target_Zero_Action_Plan_2025.pdf
2. https://www.saferoadssouthjersey.com/salem

Transportation Choices

Fair distribution of transportation investments is a fundamental principle of Complete & Green Streets. All users of the transportation system should benefit from our shared streets regardless of income, ability, or other differences. For those whose transportation choices are limited by circumstance or location, pedestrian, bicycle, and transit access to essential services and community destinations such as hospitals, medical offices, senior centers, schools, employment centers, bus routes, and transit stops can be life-changing (Figure 7).

Complete Streets in Pennsville and New Jersey

New Jersey is a leader in the Complete Streets movement. In 2009, the New Jersey Department of Transportation (NJDOT) was among the first state DOTs in the nation to adopt an internal Complete Streets policy. Since 2009, NJDOT has funded seven Complete Streets Summits and more than a dozen local, regional, and statewide in-person and online educational workshops intended to disseminate the latest information about Complete Streets to planners, engineers, elected officials, and advocates. In 2017, NJDOT released the New Jersey Complete Streets Design Guide to inform New Jersey communities on how to implement Complete Streets projects. In 2019 (with updates in 2020), NJDOT released the Complete & Green Streets for All: Model Complete Streets Policy and Guide to serve as a resource for local best practices in policy language. One of the positive outcomes of these efforts is that communities of all sizes throughout the state have joined NJDOT in adopting Complete Streets policies. Of New Jersey's 21 counties, eight have adopted Complete Streets policies. Additionally, 185 municipalities have implemented their own policies (Figure 8). In November 2024, NJDOT updated its internal policy and checklists[3].

Pennsville adopted a Complete Streets policy via a resolution of support in 2018. Salem County does not have a policy.

3. https://njbikeped.org/complete-green-streets-for-all-model-policy-guide/ and https://www.nj.gov/transportation/eng/completestreets/resources.shtm



Figure 8. Newly installed high-visibility crosswalks and accessible ramps by Penn Beach Elementary School.

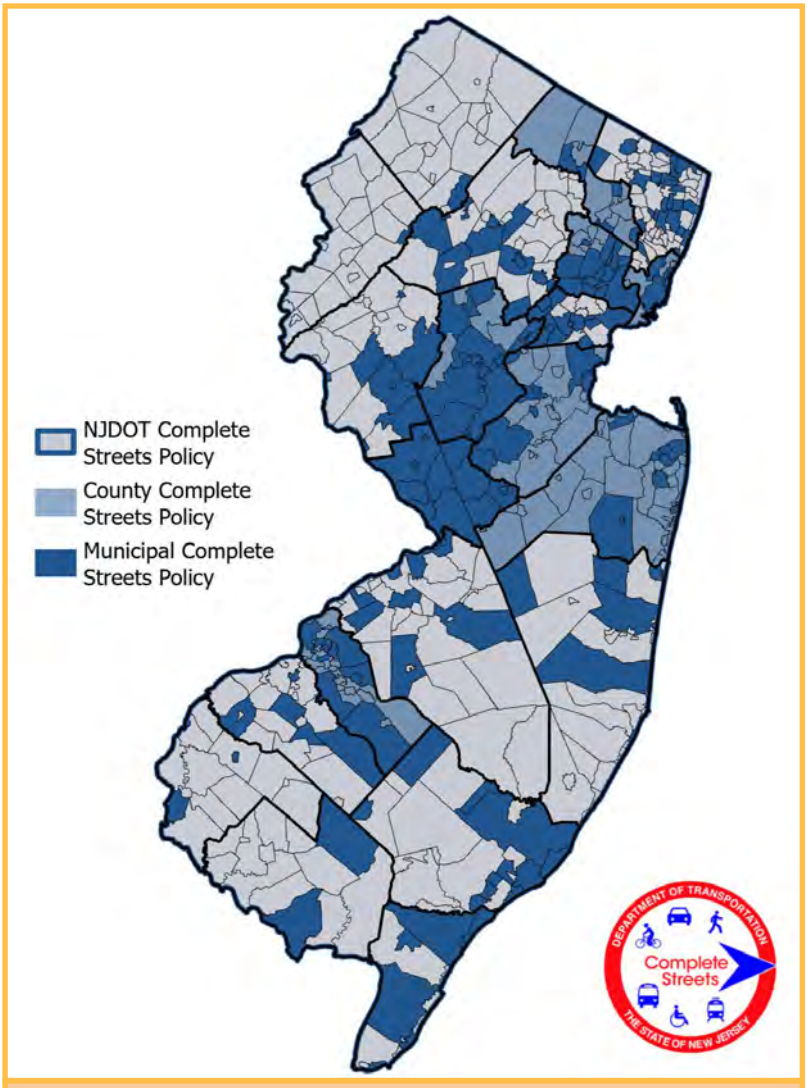


Figure 7. Complete Streets Policies in New Jersey, as of May 1, 2026. Source: njbikeped.org/nj-complete-streets-policy-compilation/

What is a Temporary Demonstration Project?

Demonstration projects are an approach to neighborhood building that uses short-term, low-cost, scalable Complete Streets interventions to affect long-term change related to street safety and public space. This approach can draw attention to perceived shortcomings of the current roadway design, widen public engagement, test interventions, and inspire action.

Demonstration projects allow communities to quickly make high-priority safety and livability improvements. They also provide flexibility due to the temporary nature of improvements. Rather than debating the costs and benefits of a curb extension, a municipality can paint one and observe the new dynamic between pedestrians and drivers without committing to a permanent change. They allow for the collection of operational data and community feedback that can be used to refine the final permanent design (Figure 9).

Demonstration projects can be used to spur conversation around neighborhood improvements, allowing residents to evaluate potential changes before permanent installation. The projects can be used to solicit local ideas to address planning challenges, taking the debate out of the hands of the local public agency and placing it on the street where people can experience and respond to the proposed changes.



Figure 9. A demonstration project in Verona, NJ created during a CSTA project.

Best Practices in Demonstration Projects

Successful demonstration projects employ low risks for high returns, inspiring people to think differently about their surroundings. For example, painting curb extensions enables residents to experience safer, more visible street crossings and provide input for permanent implementation. Beyond function, demonstration projects may provide aesthetic improvements through the installation of planters and art. Examples of demonstration projects in New Jersey include:

Painted Curb Extensions

Maintaining visibility at intersections can improve safety outcomes for all roadway users. While New Jersey law prohibits parking within 25 feet of a corner for visibility, this regulation is frequently violated. In 2017, the City of Jersey City engaged planning consultants to conduct a series of six walkability workshops. The workshops included a public-feedback board, tables and chairs, wayfinding signage, planters, and colorful paint (Figure 10). By shortening the crossing distance for pedestrians, curb extensions provide a tangible experience of potential safety improvements, allowing participants to offer input for future implementation. Temporary curb extensions are now part of the municipal toolkit and have been installed throughout the city.



Figure 10. Painted curb extensions in Jersey City. Photo by Street Plans.

Pedestrian Malls

In 2015, Jersey City created a new pedestrian plaza on Newark Avenue using planters, paint, tables, and chairs. One of the major concerns about pedestrianizing a roadway was how a plaza would affect many businesses, both in terms of visibility from drivers and being able to receive deliveries. The temporary demonstration project allowed all stakeholders to view the results with the understanding that the design was fully reversible, if needed.

However, the temporary plaza was very successful, and in 2021, the city completed a permanent plaza with stone pavers, larger planters, enhanced lighting, benches, pedestrian safety bollards, and other public space features (Figure 11).

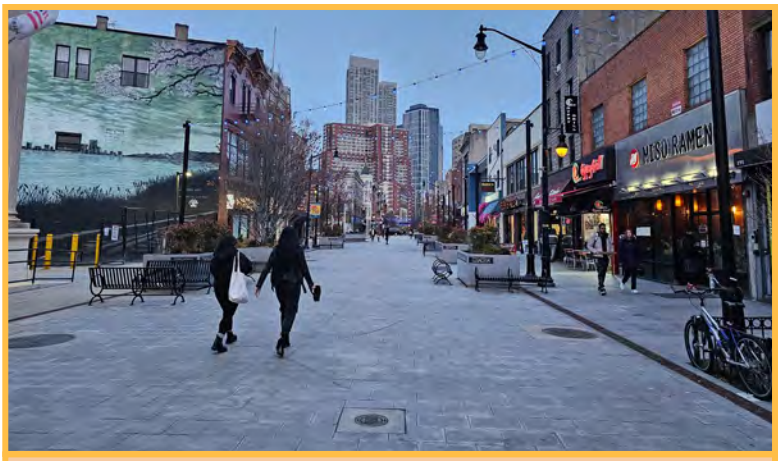


Figure 11. Originally a demonstration project, the Newark Avenue pedestrian plaza is now a permanent installation.

Temporary Bicycle Lanes

As part of the creation of a Complete Streets Policy and Implementation Plan funded by the NJTPA, Keyport Borough and Monmouth County constructed a temporary two-way bike lane and crosswalk at the intersection of Maple Place, Atlantic Street, and Church Street. The project aimed to calm traffic, increase the visibility of pedestrians and bicyclists to motorists at the intersection, and create safe access to the nearby Henry Hudson Trail (Figure 12).



Figure 12. Bicyclists navigating the temporary on-road bicycle lane in Keyport, NJ. Photos by NJTPA.

SJTPO Complete Streets Demonstration Library

Recognizing that the procurement of specialized traffic calming materials can be a financial barrier for local public agencies, the SJTPO established a regional lending library as part of the CSTA program. This new resource allows communities to borrow materials—such as high-visibility paint, movable plastic bollards, flexible delineator posts, traffic cones, and stencils—entirely free of charge. Cross County Connection TMA developed an inventory of materials, procured them through a competitive process, and will maintain a database of which materials are available for communities to request and use. For Pennsville Township, the availability of these materials meant that a robust, multi-block intervention could be deployed rapidly and efficiently, leveraging the expertise of CCCTMA staff and the local Department of Public Works without straining the municipal budget.

Starting in 2026, municipalities and counties in southern New Jersey, including Atlantic, Cape May, Cumberland, and Salem Counties, may request use of the materials. Municipalities and counties from outside of this region will also be considered. However, priority consideration will be given to those within the SJTPO region.

A dedicated website was launched to support this effort at https://www.sjtpo.org/demolibrary/. The website hosts the program guide, application form, and user agreement. A video explaining the program and process is also available on CCCTMA's YouTube channel[4]. A dedicated email address, DemoLibrary@sjtpo.org, was established to help local public agencies with questions about the program or request use of materials.

4. https://www.youtube.com/@CCCTMA

Project Location and Assessment of Need

Pennsville Township is a waterfront community situated along the Delaware River in Salem County, New Jersey. Covering a total land area of approximately 21.3 square miles, the Township serves as a critical node in the South Jersey regional landscape, as it hosts the Delaware Memorial Bridge (I-295), connecting New Jersey to Delaware and points south (Figure 13).

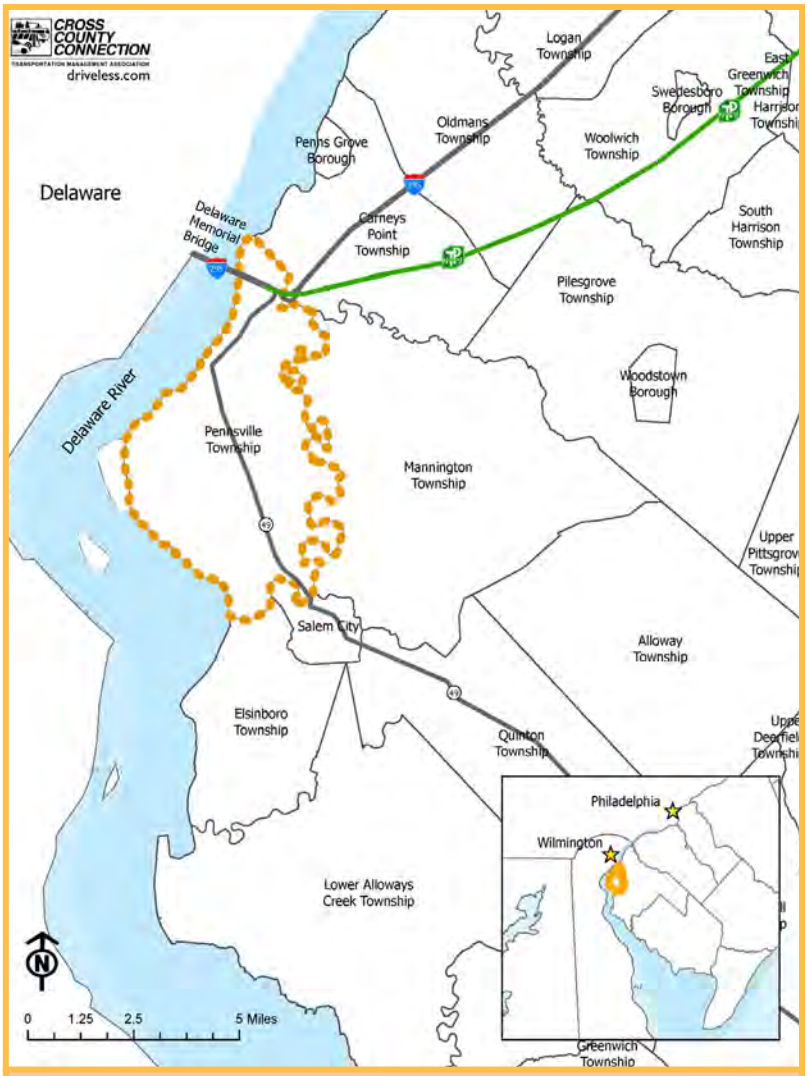


Figure 13. Map of Pennsville Township.

According to the Census Bureau's 2025 American Community Survey (ACS) 5-Year Estimates, Pennsville is home to 12,923 residents. The median household income in the Township is approximately $75,097, with a poverty rate of 12.2%. Housing demographics indicate a high rate of owner-occupied properties, encompassing roughly 79.8% of households. The median age in Pennsville is 41.1 years, with a demographic breakdown revealing that 11% of the population is under the age of 9, 13% is between 10 and 19, and nearly 27% of the population is aged 60 or older. The mean travel time to work is 24.3 minutes, and 90% commute to work in a car.

For this project, Pennsville officials requested that the following roadways be studied as part of a route between Riverview Beach Park and Fort Mott State Park:

- Pittsfield Street
- Front Street
- Main Street
- Enlow Place
- Riviera Drive
- Industrial Park Road (County Route 670)
- Fort Mott Road (County Route 630)

Additionally, the study team looked at other roadways to see if there were opportunities to build a larger connected network:

- Harvard Road
- Kansas Road
- Mahoney Road
- K Drive

Riviera Drive is the longest of the studied roadways. It is located in a residential neighborhood and parallels the Delaware River. The Pennsville roadway grid is irregular; as such, Riviera Drive is the only roadway that provides an extended north-south connection at the west end of the town. The unique characteristics of the roadway are why it was chosen as the site for the temporary demonstration and for the on-road bicycle path design. Detailed descriptions of each roadway are provided in the Recommendations section.

Traffic Volumes, Speed, and Crash History

Most roads in the study area have a speed limit of 25 mph, with two having 50 mph limits. Speed data was collected on Riviera Drive by Salem County as part of the temporary demonstration. The data found that the 85th percentile speed was consistently above the speed limit, measuring at 34 mph. The 85th percentile speed is the speed at which the majority of drivers (85 percent) travel at, or below, on a road segment. If the 85th percentile speed is appreciably greater than the posted speed limit, then traffic calming measures and additional traffic enforcement may be warranted.

According to NJDOT crash data posted on their crash data portal[1], from 2019–2026, there were 21 reported crashes involving bicyclists and 16 involving a pedestrian within the Township (Figures 14 and 15). The majority of crashes were along US Route 46 (Broadway), including two fatalities. A minor bicycle crash was reported in April 2022 on Enlow Place, which is one of the studied roadways. Minor crashes involving only a single bicycle rider are the most common form of bicycle crash, but are rarely reported to police. As such, they are not represented in the data. E-scooter crashes are logged as "pedestrian" crashes in the database.

1. https://njdot.aashtowaresafety.net/njdot-crash-data-dashboard#/

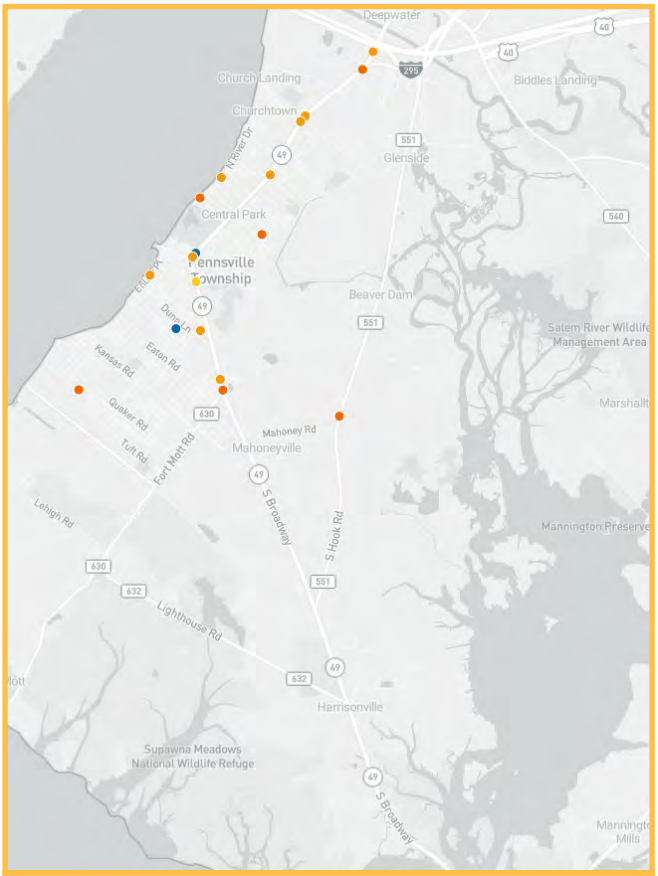


Figure 14. Map showing location of bicycle crashes, 2019-2026.

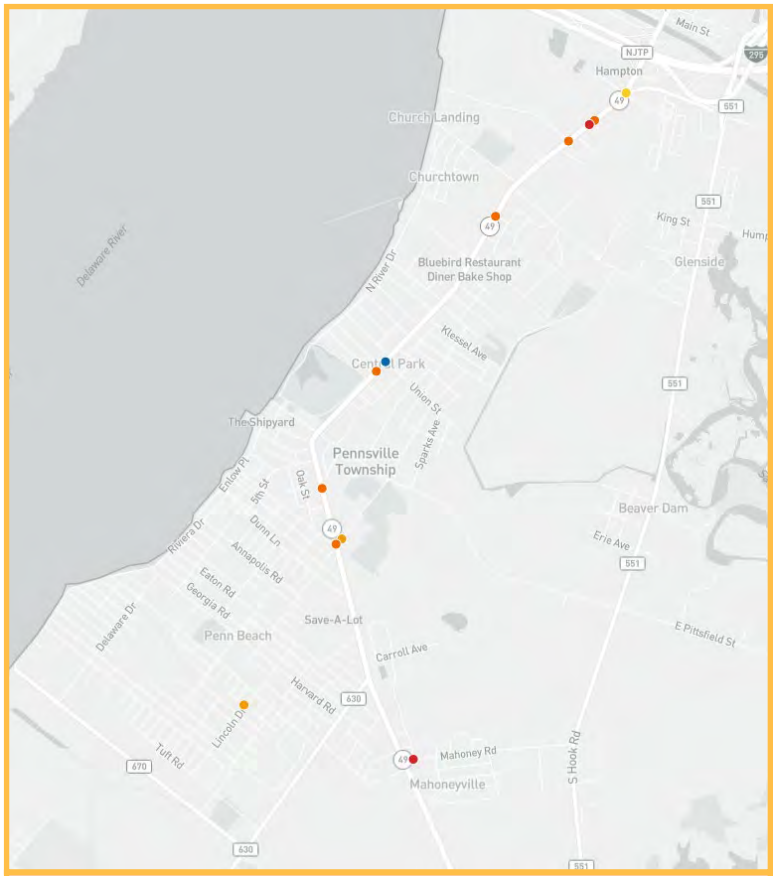


Figure 15. Map showing location of pedestrian crashes, 2019-2026.

Project Methodology

Scoping

Prior to conducting the demonstration project and corridor analysis, the CSTA project team met virtually with Pennsville officials to discuss their traffic safety concerns and gain a better understanding of the major roadways, their use, and their appropriateness for a temporary demonstration project. An initial site visit was conducted on August 2, 2025, to assess the feasibility of a demonstration project on one of the roadways (Figures 16 and 17).The project team then developed initial concepts for three different locations: Riviera Drive, Industrial Park Road, and Fort Mott Road. A second meeting was conducted virtually with Pennsville Township and Salem County officials to discuss options. The team decided that Riviera Drive presented the best opportunity to test a variety of concepts within a short time frame. The concept for Industrial Park Road is shown in Figure 18.



Figure 16. August 2025 site visit.



Figure 17. August 2025 site visit.

Although the initial concept was for a bicycle-related project, the team pivoted to a traffic-calming project that would enhance safety for pedestrians and bicyclists by lowering vehicle speeds. The project would help the township to educate residents about road redesign options, collect community feedback, and develop internal competency on quick-build installations that could be trialed in other parts of town.

Design elements intended to reduce speeds and improve safety were:

- Narrowing the southbound lane with a tapered shoulder to reduce pedestrian crossing distances and visually narrow the roadway.
- High-visibility crosswalks across Riviera Drive at Dartmouth Road and Eaton Road.
- Supplementary "Stop for Pedestrians in Crosswalk" signage.
- Painted curb extensions on Dartmouth Road and Eaton Road to prevent parking too close to the intersection and visually narrow the roadway.
- Extension of the riverside trail into the parking lot and a narrowed parking lot entrance.



Figure 18. Design concept for Industrial Park Road.

Supporting Materials

The CSTA team provided Pennsville Township with guidance on the installation and design of the project, including the materials needed, use of a speed radar for pre/post data collection, and Manual on Uniform Traffic Control Devices (MUTCD) requirements for striping and placement of vertical elements. Before installation, the project team developed outreach materials aimed at residents. The township distributed flyers to residents, shared project details through social media, and installed a poster at the demonstration site. The flyer informed community members about the demonstration project and solicited comments through an online questionnaire. The double-sided flyer is found on the next two pages (Figures 19 and 20).

RIVIERA DRIVE TEMPORARY DEMONSTRATION PROJECT

November 2025 (Depending on Weather!)

Pennsville wants your input on making Riviera Drive safer!

Pennsville Township is working with the Rutgers-Voorhees Transportation Center, Sustainable Jersey, and the South Jersey Transportation Planning Organization to make walking and bicycling safer along Riviera Drive. The Township will be making temporary changes in early November (weather dependent), and wants to know what **YOU** think!

What is a Temporary Demonstration Project?

A Temporary Demonstration Project is a low-cost way to test out new traffic patterns and get community input before committing to permanent changes. It allows residents to see and use the infrastructure to provide feedback instead of relying on concept images or descriptions.



What changes will Pennsville be testing?

Pennsville will be testing painted curb extensions and marked crosswalks between Cornell Road and Fordham Road along Riviera Drive.

I live on Riviera Drive. Will access to my home change?

No. Two-way traffic will still be allowed.



How will the Township make the changes?

As part of this demonstration, temporary road striping and signs will be added. In addition, flexible delineator posts (third picture) will be placed to help drivers understand the new traffic pattern. Installation takes just a few hours.

How will these changes improve traffic safety?

Slower streets are safer for drivers, pedestrians, and all people using the road. The treatments being tested here encourage drivers to drive more slowly, making it safer for pedestrians to cross the street and for bicyclists to share the roadway.



How long will the demonstration be in place?

Changes will be in place for a few weeks, depending on the weather.

How will success be measured?

The team's evaluation will include speed studies, direct observations, and feedback from residents. An online questionnaire will be conducted once the changes are in place. A link to the questionnaire can be found on the next page.

What happens after the demonstration?

Based on the results of the evaluation, parts of the project may be removed, modified, or made permanent.

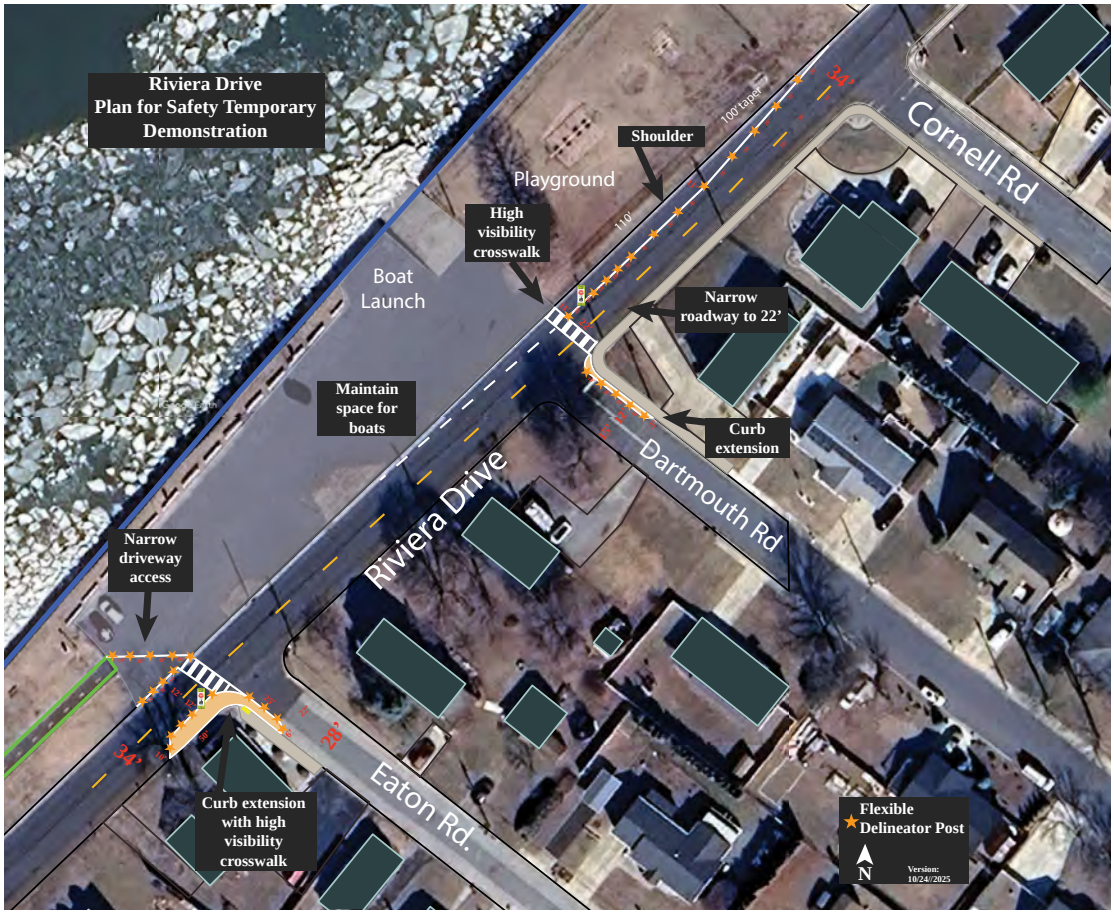
Why is this demonstration happening?

The project team is currently developing a Bicycle Network Plan for the roadways connecting Riverview Beach Park and Fort Mott State Park. The goal of the Plan will be to improve roadway safety and to encourage residents to walk and bicycle to parks instead of driving. Pennsville applied to the Complete Streets Technical Assistance program, a partnership of the Rutgers-Voorhees Transportation Center, Sustainable Jersey, and the South Jersey Transportation Planning Organization, to help organize this project.

Figure 19. Flyer, Page 1.

Temporary Demonstration

Using temporary paint and plastic bollards, Riviera Drive will be narrowed approaching the boat ramp by Dartmouth Road. Painted crosswalks will be added at two locations. Curb extensions reduce the crossing distance for pedestrians, narrow the roadway to reduce speeds, and improve sightlines by helping to enforce existing parking prohibitions near the intersection.



Public Input

Once the demonstration is in place, a questionnaire will be made available at https://go.rutgers.edu/riviera-drive or by using this QR code:

Questions?

For questions about this project, contact Pennsville Emergency Management Coordinator Steve Krough at 856-678-3089 ext: 5159 or via email at pvpdoem@pvtwp.com

Project Toolkit

The South Jersey Transportation Planning Organization (SJTPO), in partnership with Cross County Connection TMA, operates a Complete Streets Demonstration Library for the purpose of loaning materials to municipal governments and other partners to implement temporary demonstration projects on and adjacent to publicly accessible roads and other transportation facilities.

South Jersey Transportation Planning Organization
RUTGERS–NEW BRUNSWICK Edward J. Bloustein School of Planning and Public Policy Alan M. Voorhees Transportation Center
SUSTAINABLE JERSEY CERTIFIED
CROSS COUNTY CONNECTION www.drivelessc.com
Township of Pennsville

Figure 20. Flyer, Page 2.

Installation and Removal

The Township installed the temporary demonstration on Riviera Drive on November 5, 2025. Cross County Connection TMA (CCCTMA) assisted municipal staff with the installation. Prior to the installation, CCCTMA visited the site to make preliminary chalk markings (Figures 21 to 27).



Figure 21. Measuring the roadway.



Figure 22. Preliminary markings.



Figure 23. Speaking with residents,

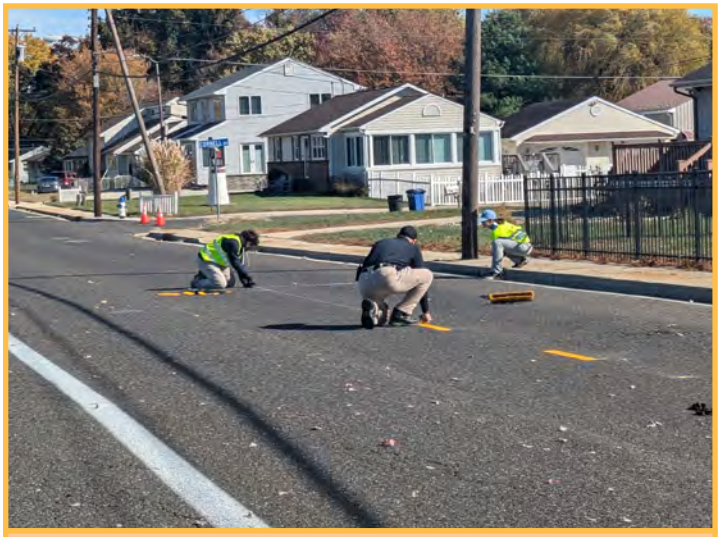


Figure 24. Adding centerline.



Figure 25. Measuring crosswalk.



Figure 26. Striping crosswalk.



Figure 27. Access to river trail.

The demonstration remained in place until December 10, 2025. During the demo, an A-frame sign was placed at the site with a copy of the flyer, providing residents with information and directing them to the online questionnaire. The questionnaire was also shared on social media.

On the date of removal, staff from CCCTMA assisted the municipality with labor and logistics required to remove the demo. After a full month, and some stormy days, the temporary paint used to fill the curb extensions and crosswalk bars was fully faded. The traffic tape, used for the yellow center dividing line, stayed in place well and was removed with a utility knife. To avoid driver confusion, the remaining markings were removed with a power wash, provided by the township. All the flexible delineator posts remained in place. Due to the intense wind the roadway experiences, the crosswalk signs fell and had to be reset by municipal staff during the demo. The A-frame used to hold the poster was not waterproof, and the printed signs were damaged (Figures 28 to 33).



Figure 28. Inspecting flex-posts.



Figure 29. Crosswalk sign.



Figure 30. Faded crosswalk.



Figure 31. Centerline tape.



Figure 32. Faded paint.



Figure 33. Damaged poster.

Questionnaire Feedback

An online questionnaire was conducted to gather input on the demonstration project from Pennsville community members. The questionnaire was opened on November 5, 2025, after the installation was completed, and closed on December 6, 2025, prior to the removal. The questionnaire was accessed 336 times during this period, of which 236 responses were completed and used for data analysis. The following is a summary of the results. The English language questionnaire is available in Appendix A.

When interpreting the questionnaire results, it's important to recognize that changes to a roadway are likely to receive an initial negative response from community members, because change can be disruptive. When considering which recommendations to advance, community leaders should balance the expected safety and mobility benefits with resident concerns.

Existing Traffic Safety Conditions

Respondents were asked to rate the traffic safety of Riviera Drive for pedestrians, micromobility users, and drivers before the demonstration. Respondents were asked to rate the safety on a scale from 0 to 10, with 10 being the safest. The corridor received an average score of 4.99 for pedestrians, 5.12 for bicyclists and scooter users, and 5.98 for drivers.

The questionnaire offered respondents multiple places to leave written comments. Using that opportunity, respondents expressed general concerns about the corridor before the demonstration was installed. Concerns about speeding cars were most common, with 28 individuals reporting worries. These comments included concerns about motorists traveling far above the speed limit, a lack of speed-controlling infrastructure to regulate traffic, and the concern that traffic enforcement was not effective.

Nine respondents were particularly concerned about the safety of pedestrians and micromobility users. Eight emphasized an unease about the behavior of young people who skateboard, speed, or participate in reckless activities along the corridor. One respondent suggested building a skate park nearby to provide a safe, designated place for this behavior.

Four respondents elaborated on concerns related to driver behavior, specifically, drivers racing one another, leading to safety risks and contributing to high noise levels. Lastly, four questionnaire participants noted that they saw no issues with the corridor before and expressed a strong belief that no changes should be made.

Perceived Safety of Demonstration by Residence of Respondent

Respondents were asked to report how they felt that the demonstration had changed safety on Riviera Drive for pedestrians, bicyclists, and drivers. Respondents could choose between "safer," "no change," "less safe," or "did not experience before change." The last option was excluded from this summary. The results of this question are summarized in Figure 34 by residency status, with categorizations of "Pennsville resident, living along Riviera Drive," "Pennsville resident, living elsewhere in Pennsville," and "Visitor."

Across all residence groups, the largest plurality reported feeling that the change resulted in a safer environment for pedestrians and bicyclists/scooter users. Thoughts were mixed regarding drivers. Slightly more Riviera Drive residents felt that the change resulted in lowered safety for drivers, while significantly more Pennsville residents living elsewhere shared this sentiment. However, the largest plurality of visitors felt that driving conditions were made safer. Of all three groups, safety perceptions reported by Pennsville residents living elsewhere (not on Riviera Drive) were the most diverse.

Safer...	For Pedestrians (n = 221)			For Bicyclists (n = 226)			For Drivers (n = 230)		
	Less Safe	No Change	More Safe	Less Safe	No Change	More Safe	Less Safe	No Change	More Safe
Pennsville Resident, on Riviera Drive (n = 56)	19%	36%	**45%**	16%	38%	**46%**	**36%**	32%	32%
Pennsville Resident, not on Riviera Drive (n = 153)	28%	30%	**40%**	27%	34%	**39%**	**53%**	21%	26%
Not a Pennsville Resident (n = 13)	25%	17%	**58%**	25%	25%	**50%**	31%	31%	**38%**

Figure 34. Perceived Safety Impact by Resident Group

Perceived Safety of Interventions by Travel Mode of Respondent

Respondents were also asked how they typically travel on Riviera Drive. Respondents were able to select more than one option. Figure 35 shows safety perceptions summarized by frequent travel mode.

Travel mode did not have a significant impact on respondents' perceptions of safety for pedestrians, bicyclists, or drivers. Those who frequently walk, bicycle, or drive along the corridor all felt fairly similarly about the safety impacts of the change.

Similar to the results summarized by residence, the largest plurality of respondents for all travel mode groups felt that the change improved safety for pedestrians and bicyclists. When asked about driver safety, results were varied. By a small margin, pedestrians and bicyclists felt that safety improved for drivers, while drivers themselves reported lowered safety, also by a small margin.

Safer...	For Pedestrians (n = 219)			For Bicyclists (n = 229)			For Drivers (n = 227)		
	Less Safe	No Change	More Safe	Less Safe	No Change	More Safe	Less Safe	No Change	More Safe
Pedestrians (n = 66)	14%	30%	**56%**	14%	29%	**57%**	30%	32%	**38%**
Bicyclists/Scooter Users (n = 48)	20%	23%	**57%**	25%	21%	**54%**	35%	22%	**43%**
Drivers/Passengers (n = 116)	21%	31%	**48%**	20%	30%	**50%**	**40%**	22%	38%

Figure 35. Perceived Safety Impact by Travel Mode

Should the Change be Made Permanent?

Respondents were asked whether each change should be permanent, with the choices "yes" or "no." When summarized by where they live, respondents who live on Riviera Drive and visitors were aligned in wanting the changes to be permanent. Pennsville residents living outside of Riviera Drive disagreed, with significantly more respondents preferring for the change not to be made permanent (Figure 36).

The largest plurality of respondents who frequently walk or bicycle/scooter along the corridor preferred that the change be made permanent, although by a small margin. Drivers were split, with half wanting the change to be maintained and half preferring not to have it become permanent (Figure 37).

	Permanence (n = 237)	
	Yes	No
Pennsville Resident, on Riviera Drive (n=60)	**53%**	47%
Pennsville Resident, not on Riviera Drive (n=164)	39%	61%
Not a Pennsville Resident (n=13)	**54%**	46%

Figure 36. Permanence Preference by Resident Group

	Permanence (n = 239)	
	Yes	No
Pedestrians (n = 68)	**56%**	44%
Bicyclists/Scooter Users (n = 49)	**53%**	47%
Drivers/Passengers (n = 122)	50%	50%

Figure 37. Permanence Preference by Travel Mode Group

Preferences for Other Changes

The questionnaire asked respondents if they would like to see other permanent changes along the corridor, such as painted crosswalks, curb extensions, bicycle lanes, speed bumps, or trees. Respondents were able to select more than one answer; hence, the larger sample sizes compared to other questions. The same results were analyzed by residence and travel mode.

Respondents across all three residence groups showed strong interest in painted crosswalks and bicycle lanes. Pennsville residents (on Riviera Drive and elsewhere) expressed an interest in speed bumps, while visitors did not. Interestingly, Pennsville residents not living on Riviera Drive showed a preference for curb extensions and trees; however, few Pennsville residents on Riviera Drive agreed. Overall, painted crosswalks, speed bumps, and bicycle lanes received the most selections (Figure 38).

Would like to see permanent...	Painted Crosswalks	Speed Bumps	Bicycle Lanes	Curb Extensions	Trees	Other	No Changes
Pennsville Resident, on Riviera Drive (n = 124)	33	32	27	11	7	8	6
Pennsville Resident, NOT on Riviera Drive (n = 298)	89	65	49	28	29	25	13
Not a Pennsville Resident (n = 30)	9	3	7	3	4	3	1
Total	131	100	83	42	40	36	20

Figure 38. Preference for Other Changes by Resident Group

When looking at the same responses by travel mode, painted crosswalks, bicycle lanes, and speed bumps were the most popular across all travel mode groups. Although "Trees" was the least selected option, excluding "Other" and "None," one response noted that trees could reduce wind along the Drive, which was a concern brought up by others (Figure 39).

Would like to see permanent...	Painted Crosswalks	Speed Bumps	Bike Lanes	Curb Extensions	Trees	Other	No Changes
Pedestrians (n = 159)	44	39	35	15	12	10	4
Bike/Scooter Users (n = 114)	30	25	29	11	8	9	2
Drivers/Passengers (n = 434)	125	94	79	40	39	35	22
Total	199	158	143	66	59	54	28

Figure 39. Preference for Other Changes by Travel Mode Group

Many respondents selected "Other." These participants were given the choice to share their own ideas. Respondents who answered this question mainly suggested increasing enforcement through police presence, speed radar signage, or ticketing. Others suggested flashing pedestrian signals, stop signs, sidewalk consistency, and other improvements, and striping (Figures 40 to 42). Many of these ideas are summarized in the written response analysis on the next page.



Figure 40. Bicycle lane in Pennsville.

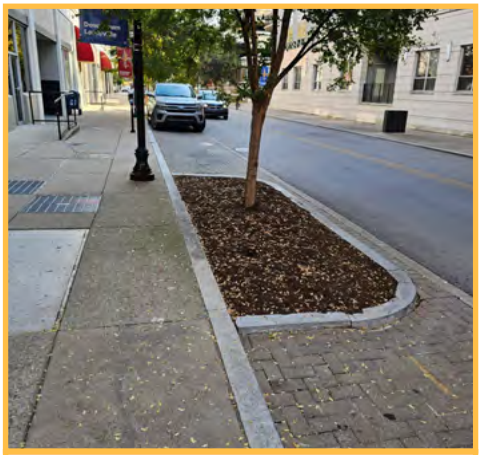


Figure 41. Curb extension with tree.



Figure 42. Flashing pedestrian signal.

Written Responses

Written response questions were included throughout the survey to understand respondents' concerns, comments, and recommendations regarding the corridor and the demonstration. Some questions specifically asked about respondents' perceptions of the attractiveness of the change and reasoning behind safety perceptions and permanence preferences, but respondents were also asked to provide general insights regarding the change. These questions were optional, and many chose to leave these sections blank. Written responses were coded and categorized, and similar categories were combined to allow for simpler summarization.

Written responses were split into four sections: concerns about the demonstration (Figure 43), positive comments about the change (Figure 44), general concerns about the corridor (Figure 45), and recommendations (Figure 46). As noted above, comments were categorized by their general topic. Not all comments received were included in this analysis; a few comments that did not fit into any larger category have been excluded. However, some excluded comments have been noted throughout this written analysis.

Temporary Demo Concerns	Responses
Aesthetics	32
Road feels too narrow	27
Ineffective	22
Dangerous	22
Confusing, difficult to navigate	14
Low visibility	7
Distracting	4

Figure 43. Written concerns about the demonstration project.

Corridor Concerns	Responses
Speed	28
Safety	9
Behavior of young people	8
Behavior of driver	4
No need for changes	4

Figure 45. Written concerns about Riviera Drive.

Temporary Demo Positives	Responses
Overall positive perception	32
Slows traffic	27
Improves safety	22

Figure 44. Positive comments about the demonstration.

Corridor Recommendations	Responses
Enforcement	28
Speed bumps	24
Crosswalk improvements	20
Signage improvements	17
Sidewalk improvements	9
Bike lanes	8
Lighting	3

Figure 46. Suggestions for future improvements.

Demonstration Concerns

The largest plurality of comments, with a count of 32, expressed concerns about the aesthetics and visual appearance of the change. These included concerns about the corridor looking too urban or out of place, being an eyesore, or looking messy or cluttered. While these are understandable concerns, it is important to note that the implemented changes are temporary. A permanent installation would use higher-cost, more durable materials that would result in an improved appearance.

Twenty-seven respondents expressed a concern about the road feeling too narrow after the change. While the change did not physically narrow the roadway, this remained a common perception among participants. Among them, some respondents reported worries that the (perceived to be) narrowed road would not allow ample space for boats, trailers, or trucks, while a few were concerned that the narrow feel would cause drivers to pay attention to the flexible delineator posts rather than to pedestrians or cyclists crossing the street. Others expressed concerns that the road would be too narrow for cars to pass one another or other road users properly and could lead to crashes. Interestingly, one other respondent actually recommended that the road be purposely narrowed to reduce speeding.

Effectiveness was also a common concern. Twenty-two respondents reported feeling that the change was ineffective or that users ignored the directions outlined by the change. Most of these comments included observations that drivers disregarded the signage or that the change did not adequately discourage speeding, thus becoming ineffective.

Twenty-two respondents reported that they felt the change had made the road dangerous. These comments mostly consisted of concerns about vehicle crashes and crashes involving bicyclists and pedestrians. Many expressed a worry about cars swerving to avoid the flexible delineator posts, which could lead to crashes, and concerns about increased crash risks due to the "narrow" feel or lack of driver compliance. Comments that included concerns about narrowness in addition to crash or danger risks were counted for both categories. Those worried about pedestrian and bicyclist safety mainly expressed concerns about the crosswalk being ignored by drivers, not having a safe amount of space to walk or cycle, or being involved in crashes.

Fourteen respondents felt that the change was confusing or difficult to navigate. Concerns included confusion about a new concept for residents, unease about navigating turns, parking lot entrance accessibility, and a general sense of confusion for both drivers and pedestrians using the roadway after the change.

Seven comments reported low visibility as a concern. Most reported this as a particular issue at night, and a few recommended adding streetlights to address the issue. Others expressed that the demonstration materials were only visible up close and could not be seen further down the corridor. One respondent noted that there is a slight incline near the boat ramp that reduces visibility.

Four respondents expressed that the changes were distracting for drivers. Two felt that the objects used in the demonstration were visually distracting and led drivers to pay less attention to other surroundings, while the others simply stated that the change was distracting overall.

Positive Feedback

Many respondents provided positive feedback about the demonstration. Sixteen expressed a general positive perception of the change with no specific details noted, such as: "This project definitely makes cars slow down and pay attention to the areas now. Thank you!" Fifteen stated that the demonstration slowed traffic. One respondent provided a longer anecdote, stating that they ride a bicycle along the corridor almost daily and saw a noticeable change in vehicle speeds during the demonstration period. Ten respondents felt that it improved safety in general. Many of the responses indicating improved safety conditions felt that the change made the corridor safer for pedestrians and cyclists in particular. A few expressed gratitude toward those overseeing the demonstration and maintaining efforts to improve safety in the municipality. However, given that the questionnaire specifically asked about safety perceptions earlier in the questionnaire, it is likely that respondents did not feel as obligated to comment on improved safety separately.

Recommendations

Respondents were asked if they had general thoughts on safety changes for the corridor. Enforcement was the most frequent recommendation, with 28 comments. These predominantly included recommendations for increased police presence and ticketing speeding motorists. A few respondents commented specifically on a lack of police or enforcement, which were included in this category. One participant recommended enforcement targeted at dirt bikes along the corridor in addition to other enforcement measures. Another suggested a higher police presence near the parking lots along the roadway to keep an eye on young people who frequent the lots.

Twenty-four respondents suggested implementing speed bumps. While many participants selected speed bumps as an idea for other permanent changes earlier in the survey, most of these comments specifically suggested them as an alternative to the installed demonstration as a way of reducing high speeds along the corridor, rather than in addition to it.

Twenty respondents recommended crosswalk improvements, including flashing pedestrian crosswalk signals, striping, and new, painted crosswalks. Seventeen suggested signage-related improvements, which included recommendations for stop control, radar speed feedback signage, signage using bright colors, and more signage overall.

Nine respondents suggested making improvements to sidewalk conditions, such as improving sidewalk consistency, adding more sidewalks in general, and better connectivity between sidewalks and bike paths. Similarly, eight recommended adding bicycle lanes. Lastly, three participants suggested adding lighting. As mentioned earlier, these respondents recommended this change following complaints about low visibility, especially at night. One comment suggested adding trees along the corridor to enhance the visual appeal and reduce the wind.

Speed Data

Salem County assisted the project team by collecting speed data before and during the demonstration. During each period, data was collected for ten days.

	Mean Speed (mph) Base	Mean Speed (mph) Temp Demo	Change in Speed (mph)
Location 1	29.6	27.7	-1.9
Location 2	28.8	26.1	-2.7

Figure 47. Mean speeds, before and during the demonstration.

	85th Percentile Speed (mph) Base	85th Percentile Speed (mph) Temp Demo	Change in Speed (mph)
Location 1	34	31	-3
Location 2	33	30	-3

Figure 48. 85th percentile speeds, before and during the demonstration.

The 85th percentile speed represents the speed at or below which 85% of vehicles are traveling under free-flowing conditions. If the 85th percentile speed exceeds the intended safe speed of the corridor, the roadway's physical design requires geometric modification. A pedestrian struck by a vehicle traveling at 34 mph faces a greater than 50% chance of fatality. The baseline speeds recorded on Riviera Drive, therefore, pose a threat to pedestrian safety, confirming the need for changes.

During the demonstration, the 85th percentile speed fell by 3mph (Figure 48). While vehicles were still exceeding the speed limit, the change in speeds is statistically significant. However, more changes are needed to bring speeds down to the desired limit.

Public Meeting and Final Draft

After analyzing the survey results, the project team developed draft recommendations for the project area Those recommendations were presented to residents and town officials in a public meeting on April 29, 2026. Feedback from the meeting was incorporated into the final recommendations, which are found on the following pages.

Additional Demonstration Photos



Figure 49. View from river trail.



Figure 50. New marked crosswalk and signage.



Figure 51. Looking north on Riviera Drive.

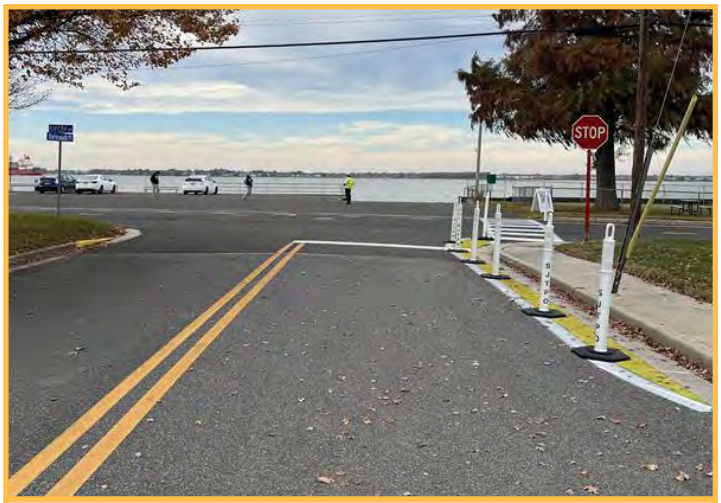


Figure 52. Looking west on Eaton Road.



Figure 53. Overhead view of Riviera Drive and Eaton Road.



Figure 54. Looking south over Riviera Drive.

Recommendations

The *Pennsville Bicycle Network Plan* includes recommendations for seven streets that connect between Riverview Beach Park and Fort Mott State Park, and four streets in other sections of the Township. The plan envisions how to complete the streets by providing accommodations for non-motorists, such as those walking and biking, using e-scooters, riding skateboards, or using other forms of human-powered travel (Figure 55). Implementing the recommendations can make walking or bicycling a comfortable and practical option for traveling between the parks, visiting the riverfront, going to school, and making short trips around town. The goal of the recommendations is to improve safety, accessibility, and comfort.

The recommendations on the following pages are listed by street, not in order of importance or difficulty of implementation. Prioritization is a question that Township officials and residents must address as they decide to move forward with implementation. Although bicycle and pedestrian infrastructure has a strong network effect in that residents become more comfortable walking and cycling when their entire route has safe infrastructure, it is not necessary for the entire plan to be implemented at the same time. Many of the improvements can be made gradually as funding allows or can be added during the Township's standard roadway maintenance cycle.

The recommendations have been developed in line with the New Jersey Complete Streets Design Guide (developed by NJDOT) and the 11th edition of the Manual on Uniform Traffic Control Devices.



Figure 55. Bicyclists and pedestrians in Pennsville.

Riverview Beach Park / Pittsfield Street

Riverview Beach Park hosts an internal trail system and a walkway along the river. At the southern end of the park, the trail ends at Pittsfield Street, across from The Shipyard's parking lot (Figures 56 to 59).

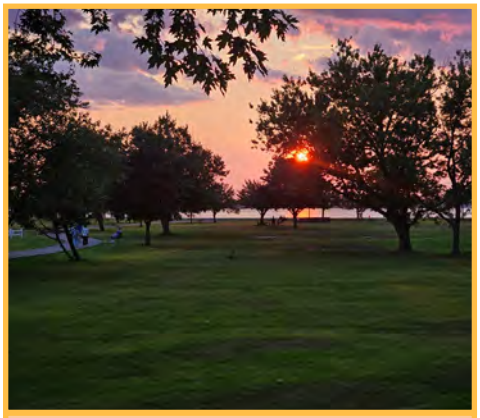


Figure 56. Riverview Beach Park.



Figure 57. Riverview Beach Park.



Figure 58. Looking north along river,



Figure 60. Looking south from Riverview Beach Park to Front Street.

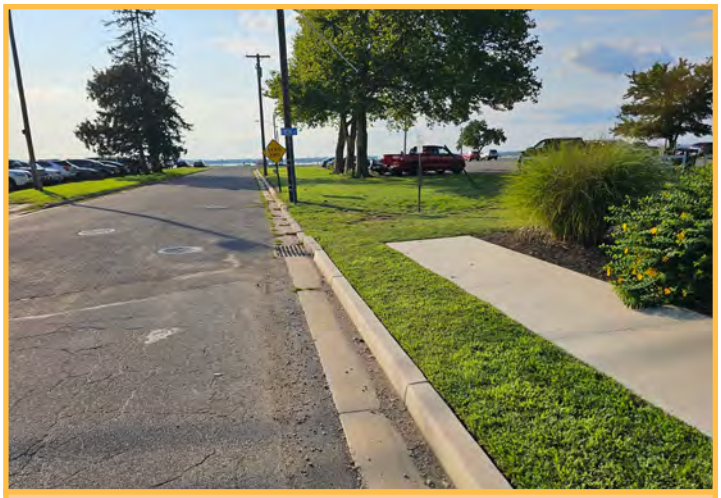


Figure 61. Looking west on Front Street.

Pittsfield Street extends across town and terminates at the river's edge. For the westernmost block, the roadway provides access to the Riverview Beach Park parking lot and one of three access points to The Shipyard's parking lot. In this segment, Pittsfield Street is 30 feet wide and allows parking. Although the roadway has low traffic volumes, it does not provide an aesthetically pleasing entrance to the park. There are no sidewalks along this segment.



Figure 59. Pittsfield Street and surrounding land use.

Vehicular access must be maintained to access the Riverview Beach Park parking lot. However, it may be possible to reconfigure The Shipyard's parking lot to decrease vehicle volumes on the roadway. Doing so would allow an extension of the riverside trail to create an attractive entrance.

Figure 63 shows the proposed changes. The west end is fully closed to motor vehicles. Access to the Riverview Beach Park lot is maintained through a low-speed shared roadway. Shared roadways are spaces where motor vehicles are allowed, but must travel at no more than 5 mph—like in a parking lot. Pedestrians are able to walk in the existing roadway (Figure 62). In the short term, these changes can be done using just paint, signage, and vertical elements like planters or flex posts (Figure 64). In the long term, the road can be rebuilt with permanent landscaping and a textured pavement to better denote the character of the roadway (Figure 65).

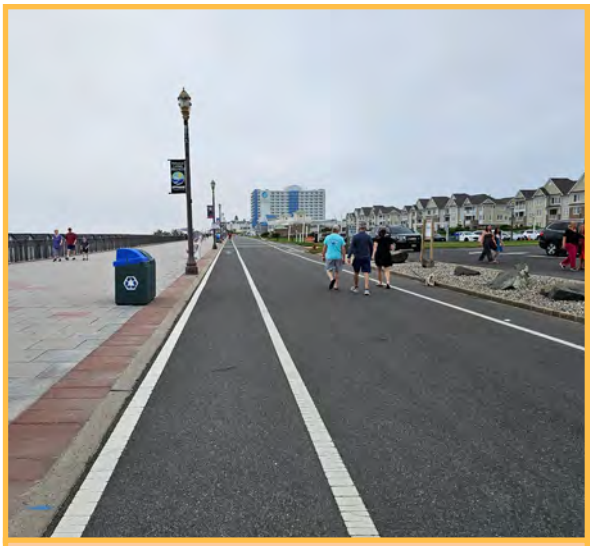


Figure 62. Shared roadway in Long Branch, NJ.



Figure 63. Pittsfield Street with proposed changes.



Figure 64. Shared roadway, Washington, DC.



Figure 65. Long-term re-imagining of Pittsfield Street.

Front Street

Front Street, between Pittsfield Street and Main Street, is 450 feet long (Figure 66). It resembles an alley in design and use: the roadway is very narrow, at just 18 feet wide, but accommodates traffic in both directions for residents. Some properties have sidewalks, but they don't connect down the entire block. Homes along the roadway have driveways, so vehicle access must be maintained (Figures 67 and 68).



Figure 66. Front Street and surrounding land use.



Figure 67. Looking south on Front Street, from Pittsfield Street.



Figure 68. Looking north on Front Street, from Main Street.

Front Street can be reconfigured to provide for one-way vehicular access while accommodating bicycles and pedestrians in a two-way path. This maintains full vehicle access for residents while creating a dedicated space for other roadway users. Although this proposed configuration is still pretty narrow for everyone, the low traffic volumes and speeds make it possible. Signing the roadway for 15 mph will also make it clear that Front Street is intended for low speeds (Figures 70 and 71).

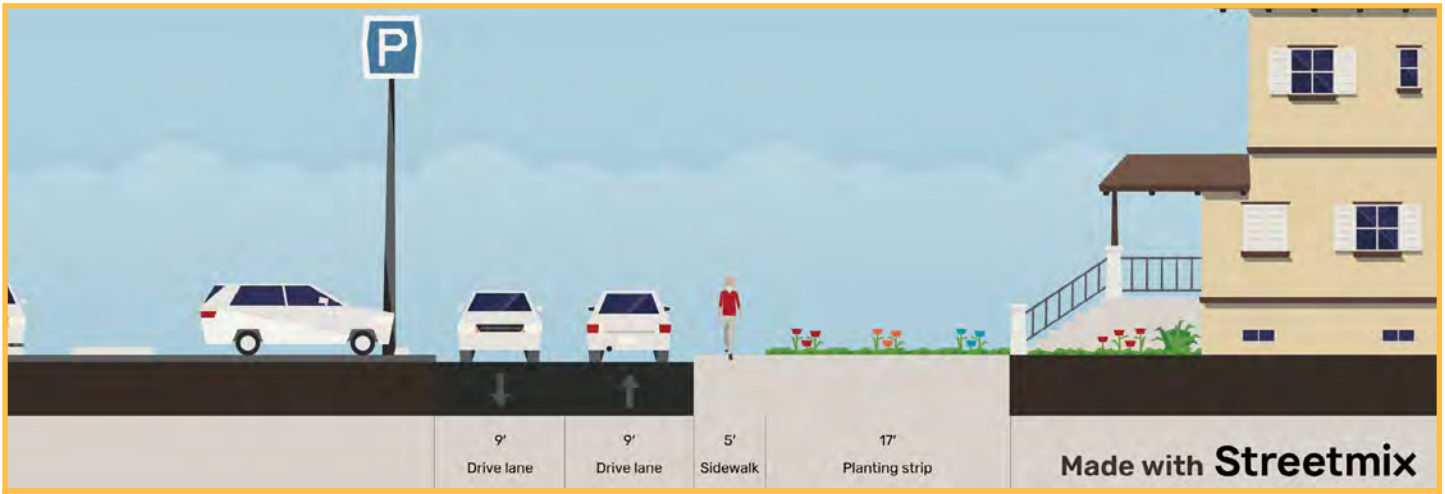


Figure 69. Existing conditions on Front Street. Frontages and sidewalks vary, but the roadway is constant.

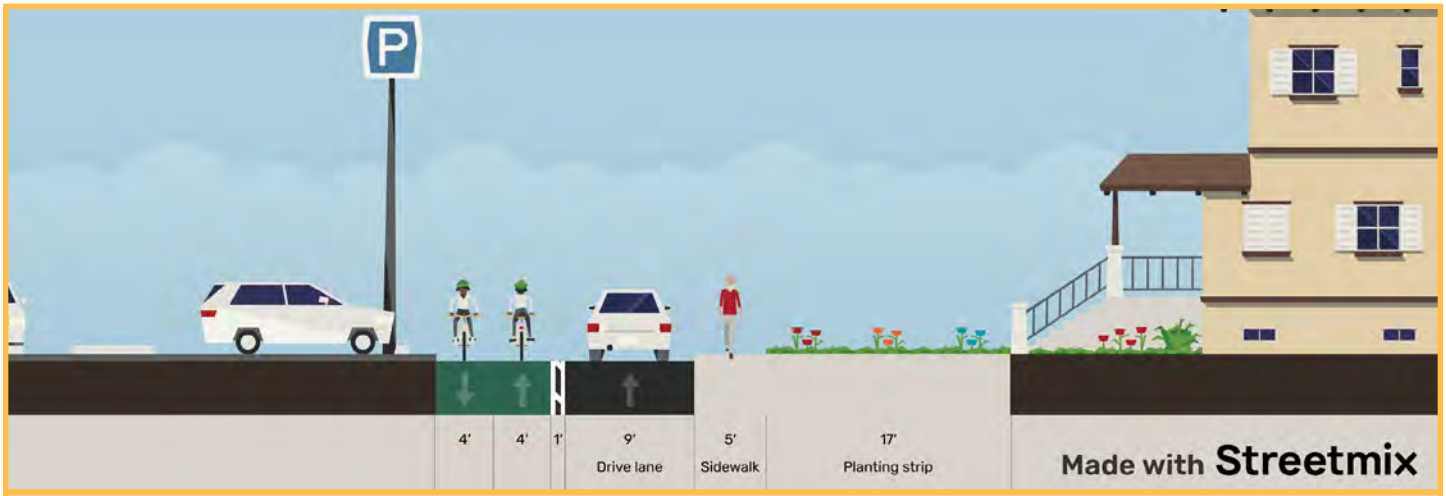


Figure 70. Proposed conditions for Front Street with a two-way bicycle path and one-way vehicular travel.



Figure 71. Rendering of an on-road bicycle path along Front Street.

Enlow Place

Enlow Place connects Main Street and Highland Avenue, with five intersections between them. For most of its length, Enlow Place is 32 feet wide. However, the southernmost 125 feet are 25 feet wide. This change affects the feasibility of certain bicycle treatments, particularly a two-way bicycle path. No parking restrictions are posted, but the roadway is not wide enough for vehicles to park on both sides (Figures 72 to 74).

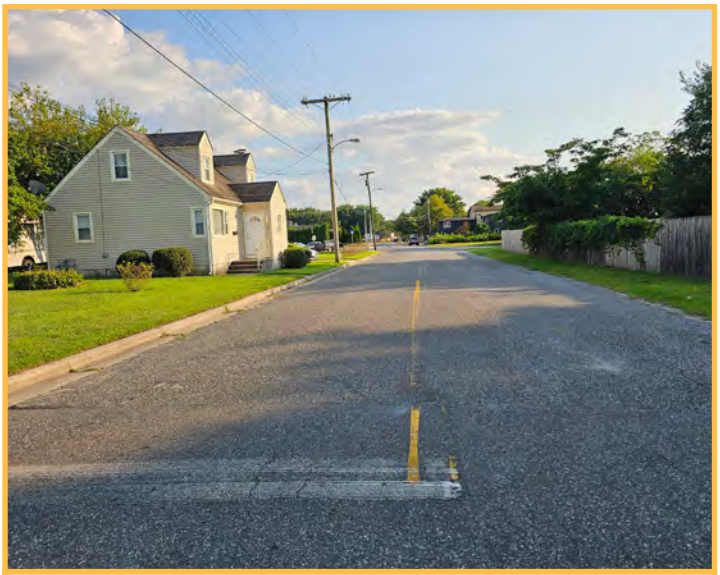


Figure 72. Looking south on Enlow Place, from Main Street.



Figure 73. Looking north on Enlow Place, from Highland Avenue.

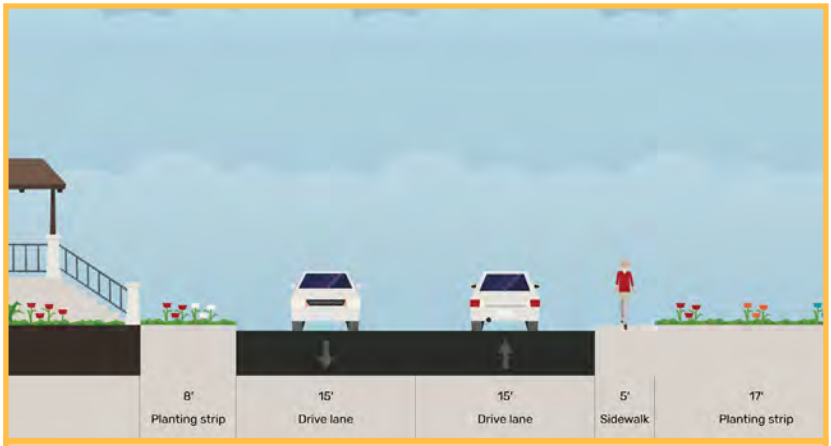


Figure 74. Existing conditions along on the majority of Enlow Place.

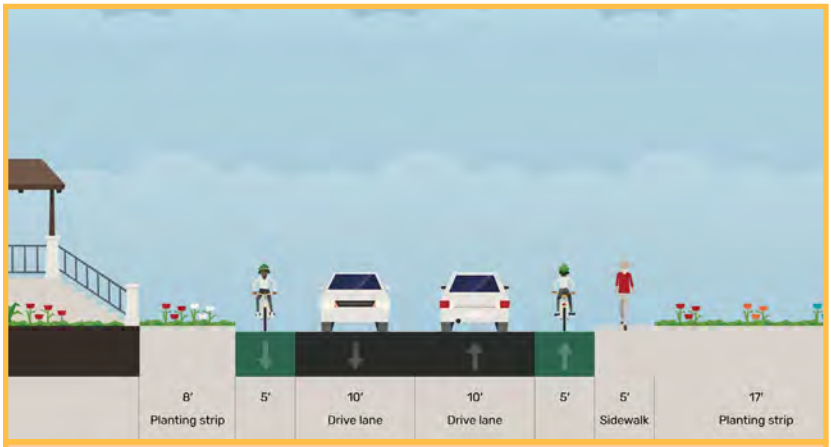


Figure 75. Proposed conditions for the majority of Enlow Place.

Enlow Place can be reconfigured to add bicycle lanes in both directions along most of its length (Figure 75). This will require the removal of curbside parking. However, all homes along the roadway have driveways, and parking is available along intersecting roadways. Where the roadway narrows to 25 feet at the southern end, one direction of the bicycle lane will have to be shared for around 125 feet (Figure 76).



Figure 76. Looking north on Front Street, from Highland Avenue, with proposed bicycle facilities.

Highland Avenue

Highland Avenue provides a short connection between Enlow Place and Riviera Drive. The current design features a large expanse of asphalt where four roadways meet at two elongated intersections. At the westernmost end, where Enlow Place meets Highland Avenue, the roadway is 43 feet wide. Moving east, Highland Avenue widens to 65 feet, and drivers can continue on Highland Avenue or onto Dunn Lane. To the south, Riviera Drive meets the intersection at a stop sign. There are no marked crosswalks or pedestrian refuge areas, and sidewalks only exist in front of some properties (Figure 77).

While the excess space presents a number of challenges, it also creates opportunities for improvements. The primary recommendation is to calm traffic and enhance safety by adding a neighborhood traffic circle, also called a mini-roundabout. A standard roundabout typically features a raised, non-mountable central island that is typically curbed and often landscaped with grass, bushes, or ornamental features to enhance aesthetics and visually block straight-through paths. Regular passenger vehicles cannot drive over the center island. The design requires a larger inscribed circle diameter (typically ranging from 80 feet for single-lane designs to over 200 feet for multi-lane configurations). It may require substantial right-of-way acquisition and space. While it could be possible to build a standard roundabout here, it would require major construction and the removal of the existing median.

Instead, mini-roundabouts can feature a fully mountable central island. The entire central circle can be paved and painted so that large vehicles—such as school buses—can drive directly over the island when making wide turns, while standard vehicles still navigate around it. It is engineered to fit directly within the existing curb lines without requiring the purchase of adjacent property. In some cases, a mini-roundabout can have a hard center, with vegetation, ornamentation, or even a tree (Figure 78).

The project team recommends that Pennsville test a mini-roundabout as a temporary demonstration project, using paint and other low-cost materials (Figure 79). Because of the boat ramp on Riviera Drive, drivers with a trailer may not expect a roundabout on this route, and a temporary design will allow for education and engagement. A demonstration will also allow the municipality to determine if a "hard" center with vegetation is appropriate, or if the permanent design should be fully mountable.



Figure 77. Aerial view of Highland Avenue intersection.



Figure 78. Mini-roundabout schematic by NACTO.



Figure 79. A temporary roundabout tested by Cross County Connection.

The project team believes there is enough space to add both a traffic circle and a two-way protected bicycle path along the western edge of the roadway. A protected bicycle path means adding a buffer, which can be temporary or permanent, such as a curb, vertical delineators, bollards, plastic or jersey barriers, or parked cars. They are built within the existing roadbed but can accommodate two-way traffic with proper treatment at intersections and driveways. In this specific application, the roadway is only wide enough to accommodate the bicycle path with a reduced buffer. If fully built out, a permanent redesign of the intersection should include accessible pedestrian facilities, including marked crosswalks and accessible ramps.

Figure 80 shows the proposed configuration. The green area marks the protected bicycle path. The yellow areas are extended curbs, which can be built with paint, concrete, or greenery. The light gray area indicates the travel area within the circle.



Figure 80. Proposed changes to the Highland Avenue intersection, featuring a mini-roundabout and protected bicycle path.

Riviera Drive

Riviera Drive is the longest segment of roadway in this report (Figures 81 to 86). Extending from Highland Avenue to Industrial Park Road, Riviera Drive covers 1.3 miles. The cross-section is consistent, with a width of 34 feet and a 25 mph speed limit. The corridor runs parallel to the river and includes nineteen intersections. At all intersections, Riviera Drive has the right of way. Sidewalks are inconsistent and exist in front of only some properties. There are no marked crosswalks or bicycle facilities. A park and playground are located at the Dartmouth Road intersection. Just south of the park, there is a boat ramp with a parking lot. A newly developed trail begins at that parking lot and continues south to Rutgers Road, where it transitions to on-road bicycle lanes. Additional parking lots are found at Harvard Road and Oberlin Road. Single-family homes line both sides of the roadway between Highland Avenue and Cornell Road. South of Cornell Road, homes are on the east side only, and most have entrances along the intersecting roadways. As noted in the Temporary Demonstration portion of this report, speeding is a concern along this corridor. Additionally, there is demand for pedestrian and bicycle access to the riverfront trail for recreation.

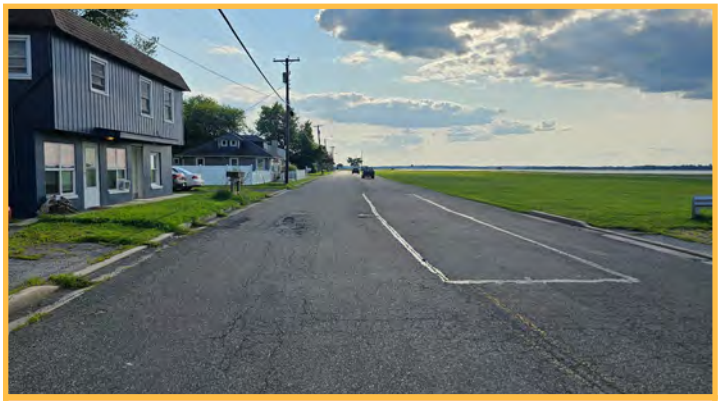


Figure 81. Looking south on Riviera Drive from Harvard Road.



Figure 82. Looking north on Riviera Drive from Harvard Road.



Figure 83. Looking east on Harvard Road from Riviera Drive.

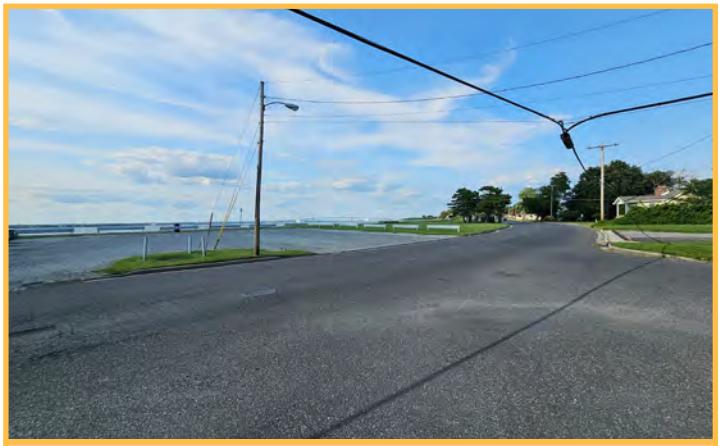


Figure 84. Looking north from Harvard Drive,



Figure 85. Looking north from the river trail.



Figure 86. Looking south from the river trail.

Between Highland Avenue and Eaton Road, there are currently no bicycle facilities. Bicycles and pedestrians can be accommodated by shifting the roadway to two standard 10-foot travel lanes and a two-way path shared by both. This design would remove street parking for 1,800 feet on Riviera Drive. There are nine homes on the west side of the street, but two of them have driveway access from Enlow Place. Of the seven that don't, five are near an intersecting roadway. There are 16 homes on the east side of the street, although 10 have access from Dunn Lane, Annapolis, Boston, Cornell, Dartmouth, and Eaton Roads. This means six homes only have access from Riviera Drive, and would lose street parking.

Figure 87 shows the existing cross-section. Figure 88 shows the proposed configuration. Figure 89 illustrates how the proposed bicycle path would connect to the boat ramp and join the existing river trail.

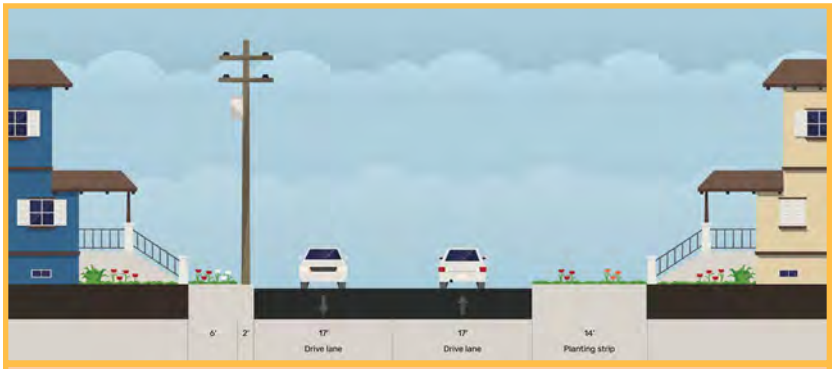


Figure 87. Riviera Drive, existing cross-section, looking south.

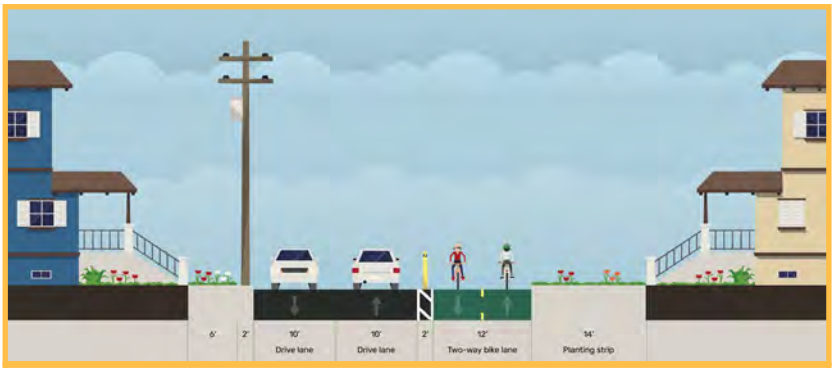


Figure 88. Riviera Drive, proposed cross-section.



Figure 89. Proposed configuration for Riviera Avenue between Highland Avenue and Eaton Road.

Building a new bicycle path

When planning the implementation of a dedicated two-way bicycle path, the infrastructural options can be categorized into three tiers of structural intervention.

The initial approach relies primarily on surface treatments, utilizing painted lanes combined with vertical delineation to separate bicyclists from vehicular traffic. As tested in the demonstration project, flexible plastic posts are effective at preventing vehicles from encroaching on the bike lane, though they are frequently criticized for lacking aesthetic appeal. A more visually appealing alternative involves installing lower-profile barriers, which maintain the necessary physical separation and safety for cyclists while offering a more refined appearance for the neighborhood (Figure 90).



Figure 90. A bicycle path protected by low-profile pre-cast concrete curbs.

An intermediate alternative focuses on enhancing the permanence of the bicycle path without necessitating a complete reconstruction of the street. This method maintains the existing roadbed, avoiding costly alterations to the stormwater drainage infrastructure. Under this model, the temporary delineators are replaced with a divider that is built out as a permanent, solid structure. Where space is available, green elements can be incorporated. Green Streets use green infrastructure practices installed within the public right-of-way to manage stormwater while preserving the primary function of a street (Figure 91).



Figure 91. A bicycle path protected by permanent green infrastructure.

The most comprehensive solution requires a complete redesign of the roadway. This involves narrowing the existing roadway and physically relocating the curbs to build a completely separate bicycle path elevated to standard sidewalk height. By reallocating the existing public right-of-way rather than expanding outward, the Township can construct this elevated path without the need to acquire any private property from adjacent residents (Figure 92). Due to the extensive engineering and construction required to move curbs and pour new elevated pathways, this option represents the highest capital investment and would depend on securing grant funding to finance the project.



Figure 92. A bicycle path built at sidewalk level in a residential area.

Additional Traffic Calming

The proposed bicycle path should help lower vehicle speeds by narrowing the roadway. However, additional interventions may be warranted along the corridor, especially south of Eaton Road, where the bicycle path transitions to the off-road trail. While speed signage is lacking, adding signage alone is not enough to ensure drivers follow the posted 25 mph speed limit. Additional tools exist to help reduce vehicle speeds, ensuring that motorists drive at the appropriate speed for the residential neighborhood. Traffic calming measures can include vertical deflection (e.g., speed humps or tables at intersections) or horizontal deflection (e.g., chicanes and mini-roundabouts) (Figures 93 and 94).

Curb extensions enhance visibility between all roadway users, decrease the crossing distance for pedestrians when used at intersections, physically prevent illegal parking, and allow for the addition of green infrastructure. In the short term, a curb extension can be created with paint and flexible vertical elements. Care should be taken to ensure the aesthetics of the extensions match the neighborhood character. Planters or granite blocks can be an alternative to plastic flex posts. In the long term, making the extensions permanent by relocating the curbs would allow for expanded greenery and complement the adjoining properties. Any relocation of the curb would need to consider stormwater drainage and utility access. Green infrastructure refers to projects that reduce flooding, add greenery, and address health concerns through the addition of vegetation. A curb extension can serve as a rain garden to collect stormwater and add native plants (Figure 95).

Speed bumps can be added at a low cost by the municipality. They can be designed to lower the speed to 25 mph while limiting the amount of noise created by larger vehicles. They can also be tetsted using temporary materials. Figure 96 shows how speed bumps and curb extensions can help lower speeds while enhancing the corridor's aesthetic appeal.

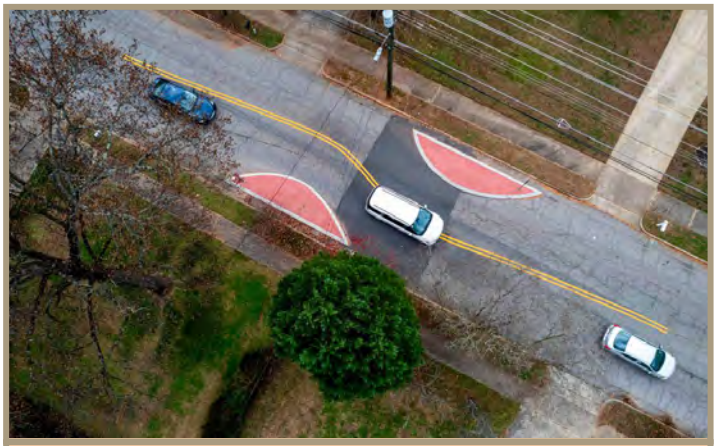


Figure 93. A permanent chicane example located at 3113 Brentwood Road, Raleigh, North Carolina.



Figure 94. An example of a raised crosswalk.



Figure 95. A curb extension with rain garden, in Newark, NJ.



Figure 96. Examples of traffic calming on Riviera Drive.

Industrial Park Road (County Route 670)

Industrial Park Road is 1.3 miles long, with a 50 mph speed limit and a width of 36 feet. There are only a few accessible properties along this road, but they generate truck traffic throughout the year. On the eastern end, the athletic fields attract residents. The roadway already has painted bicycle lanes but does not have sidewalks (Figures 97 and 98).



Figure 97. Looking west on Industrial Park Road.



Figure 98. Looking east on Industrial Park Road.

During the development of the temporary demonstration project, the area around the athletic fields was evaluated for improvements. Due to the truck traffic, the project team determined that it would not be feasible to narrow the travel lanes or install speed bumps. However, additional signage and striping can alert traffic that pedestrians may be crossing the road between the parking lot and the fields (Figure 99). Working with CCCTMA, Pennsville plans on testing this concept during Fall 2026.



Figure 99. Proposed signage and striping.

Fort Mott Road (County Route 630)

Fort Mott Road is the final roadway leading to Fort Mott State Park. The roadway width varies from 36 to 40 feet, with one travel lane in each direction and marked shoulders (Figures 100 and 101). The speed limit changes from 50 mph to 25 mph as the roadway enters a more developed part of town. However, the change in the speed limit is not accompanied by any physical changes to the infrastructure (Figures 102 and 103).



Figure 100. Looking north on Fort Mott Rd. from Industrial Park Rd.

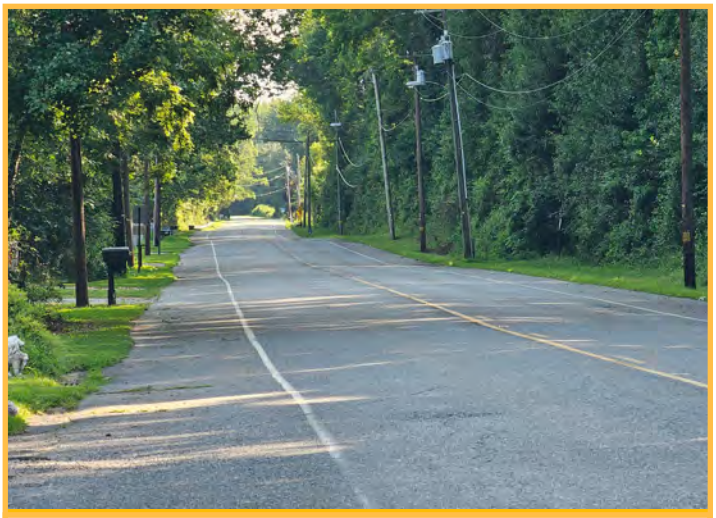


Figure 101. Looking south on Fort Mott Rd. from Industrial Park Rd.



Figure 102. Looking north on Fort Mott Road from Kansas Road.



Figure 103. Looking south on Fort Mott Road from Kansas Road.

Bicycle facilities can be added by striping the existing shoulders as bicycle lanes. However, that small change won't address any concerns with speeding. Instead, the team proposes a "gateway" treatment to welcome drivers into town and reiterate the change in speed limit. Figure 104 shows an example of a gateway treatment that uses enhanced signage and striping to reinforce the change in the speed limit while not changing the width or profile of the roadway. Striped crosswalks (and ADA-compliant curb ramps) at Kansas Road and Harvard Road should also be considered.

South of Lighthouse Road, Fort Mott Road narrows gradually, approaching Fort Mott State Park, down to about 27 feet. That is not wide enough for two bicycle lanes, but traffic volumes should be low enough for traffic calming and a shared lane with the appropriate "Bicycle May Use Full Lane" (R4-11) signage.



Figure 104. Example of a gateway treatment in England.

Off-road Path Option

The safest, most comfortable, and most direct option for bicyclists and pedestrians would be an entirely off-road path between Riviera Drive and Fort Mott State Park (Figure 105). The project team reviewed the existing conditions in this area and found that while much of the land is owned by the municipality, numerous environmental regulations would require coordination with multiple agencies. Unfortunately, the time and effort needed to investigate this option further were beyond the scope of this project. As such, the project team recommends that Pennsville seek grant opportunities to fund a study to better estimate the cost and feasibility of building an off-road path.



Figure 105. Map of existing land use and roads south of Riviera Drive and Industrial Park Road.

Harvard Road and Kansas Road

While the main focus of this report was to investigate bicycle and pedestrian opportunities between Riverview Beach Park and Fort Mott State Park, the study team looked at connector roads that would enable bicyclists and pedestrians to reach the existing riverside trail and any future additions.

Harvard and Kansas Roads connect east-west across town, from Riviera Drive to Fort Mott Road. The roads are 30 feet wide, with a 25-mph speed limit and intermittent sidewalks. Both roadways provide access to Penn Beach Elementary School (Figures 106 and 107).



Figure 106. Looking east on Kansas Road.

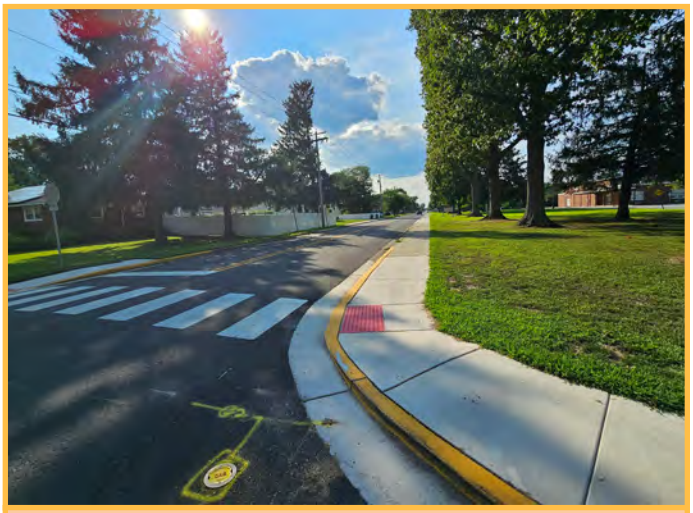


Figure 107. Looking west on Kansas Road.

The narrow width of the roadways, combined with the demand for on-street parking, makes it difficult to add dedicated space for bicycles. As such, the project team recommends "bicycle boulevard" treatments for one or both roadways.

The bicycle boulevard concept has many different names, including neighborhood greenways or quiet streets. According to the *New Jersey Complete Streets Design Guide*, bicycle boulevards are "linear corridors of interconnected, traffic-calmed streets where bicyclists are afforded an enhanced level of safety and comfort." The benefits extend beyond bicyclists, as implementation increases safety and comfort for pedestrians and drivers as well. Adopting this approach can effectively encourage bicycling and walking by reducing vehicular speeds and discouraging cut-through traffic. Bicycle boulevards use pavement markings and traffic-calming measures to encourage slower driving while accommodating local access. Common treatments include slow speed limits and speed treatments, extra-large shared-lane markers, mini-roundabouts, and traffic diverters that allow bicyclists to continue straight, but force motorists to turn (Figures 108 and 109).

A bicycle boulevard communicates that pedestrians and bicyclists have priority along the corridor and that motorists must safely share the road. The bicycle boulevard approach fits the character of the residential neighborhood.



Figure 108. Pavement markings for a bicycle boulevard in Ocean City, New Jersey.



Figure 109. Permanent mini-roundabout in Seattle, WA.

Bicycle boulevards are an unfamiliar concept to most New Jersey residents. As such, it is important to communicate the purpose of the project to residents and visitors. On the corridor itself, there are two types of signage that would need to be deployed: regulatory and informational. Regulatory markings would include speed limit signs, marked crosswalks, and instructions to drivers, bicyclists, and pedestrians where appropriate. This can include the "Bicycles May Use Full Lane" (R4-11) signs. Informational signage could include branding, wayfinding, and explanations of the project's purpose. It is important that community input informs the branding for these corridors (Figures 110 and 111).



Figure 110. Bicycle Boulevard signage in McKinley, Texas.



Figure 111. Signs for a bicycle boulevard in Portland, OR.

Pavement markings reinforce the message of the corresponding signage. Shared-lane pavement markings can show bicyclists where to position themselves and remind drivers that bicyclists may use the center of the lane. Lowering the speed limit to 15 or 20 mph is key to a successful bicycle boulevard. Reducing speeds helps prevent collisions, making bicyclists and pedestrians feel more comfortable when sharing the road with motor vehicle traffic (Figure 112).



Figure 112. Rendering of a bicycle boulevard concept on Kansas Road.

Mahoney Road and K Drive

Mahoney Road provides access to Valley Park Elementary School, on the east side of town. Although it is slightly wider than Harvard and Kansas Roads at 36 feet, it is still too narrow to accommodate dedicated bicycle facilities without removing parking. K Drive extends from Mahoney Road to Carroll Avenue, providing a short alternative to South Broadway (State Route 49) for that neighborhood. It is 30 feet wide.

Because traffic volumes are low on both streets, and the widths are limited, the project team recommends the same bicycle boulevard concept to encourage students to ride to school safely. A speed study was not conducted as part of this project, but if speeding is found to be an issue, speed bumps may provide relief.

Summary of Recommendations

Roadway	Speed Limit		Travel and Parking Lanes		Bicycle Facilities		Pedestrian Facilities	
	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed
Pittsfield Street	25	5	2 travel, parking allowed	Shared lanes, no parking	None	Shared space	None	Shared space
Front Street	25	15	2 travel, no parking	1 travel, no parking	None	Two-way bicycle path	Intermittent	In bicycle path
Enlow Place	25	25	2 travel, parking allowed	2 travel, no parking	None	Bicycle lanes	Intermittent	No change
Highland Avenue	25	25	2 travel, parking allowed	2 travel, no parking	None	Two-way bicycle path	Intermittent	In bicycle path
Riviera Drive - Highland to Eaton	25	25	2 travel, parking allowed	2 travel, no parking	None	Two-way bicycle path	Intermittent	In bicycle path
Riviera Drive - Eaton to Industrial Park Road	25	25	2 travel, parking allowed	No change	Two-way bicycle path	No change	Intermittent	No change
Industrial Park Road	50	50	2 travel, no parking	No change	Bicycle lanes	No change	None	No change
Fort Mott Road - Kansas to Old Fort Mott Road	25-50	25-50	2 travel, shoulder	2 travel, no parking	None	Bicycle lanes	Intermittent	No change
Fort Mott Road - Old Fort Mott Road to Fort Mott State Park	25-50	25-50	2 travel	2 travel	None	Shared lanes	None	No change
Harvard Road	25	25	2 travel, parking allowed	No change	None	Bicycle Boulevard	Intermittent	No change
Kansas Road	25	25	2 travel, parking allowed	No change	None	Bicycle Boulevard	Intermittent	No change
Mahoney Road	25	25	2 travel, parking allowed	No change	None	Bicycle Boulevard	Intermittent	No change
K Drive	25	25	2 travel, parking allowed	No change	None	Bicycle Boulevard	Intermittent	No change

Additional Recommendations

1. Provide and Maintain High-Quality Pedestrian Infrastructure

Most of the roadways covered in this report are well-suited for walking. However, sidewalks are intermittent, meaning pedestrians must walk in the roadway for the majority of their trips (Figure 113). The Township can refer to the regional sidewalk assessment conducted by SJTPO in 2023[2] to identify critical missing links, prioritize construction phases, and ensure that any future roadway projects automatically incorporate safe pedestrian infrastructure.



Figure 113. Sidewalks start and end intermittently.

2. Add and Maintain Street Trees

Street trees improve pedestrian comfort by providing shade and creating a buffer between moving vehicles and the sidewalk. In addition, they provide aesthetic and air quality benefits and help to absorb stormwater. During the temporary demonstration, residents identified strong winds coming off the river as a barrier to walking and bicycling during some seasons. However, they also stated that care should be taken not to block views of the river (Figure 114). The Township, working through a Shade Tree Commission and in partnership with property owners, should proactively seek to maintain existing street trees, add new street trees where there are lengthy gaps, and replace street trees that are removed due to disease or storm damage. Additionally, reducing impervious surfaces and adding green infrastructure, such as the use of stormwater tree pits or rain gardens, can help mitigate localized flooding.



Figure 114. Trees can add shade and provide a respite from wind.

3. Lighting

A lighting study was not conducted as part of this project, and the study area was not visited at night. However, the project team did notice that streetlights are placed far apart, and many intersections lack well-positioned overhead lights. Crashes occurring at night are significantly more likely to result in fatalities than those in daylight conditions. Lighting increases the visibility of all roadway users and is a way to systematically improve safety. As such, lighting is an FHWA Proven Safety Countermeasure[3]. In addition, lighting of pedestrian spaces can encourage nighttime use by alleviating personal safety concerns. Pennsville should ensure that both the roadway and sidewalks are well-lit, especially at intersections. As the study area is a residential area, Pennsville should select lighting designs that minimize glare and ensure that lighting is focused on the roadway and not on residential properties (Figure 115).

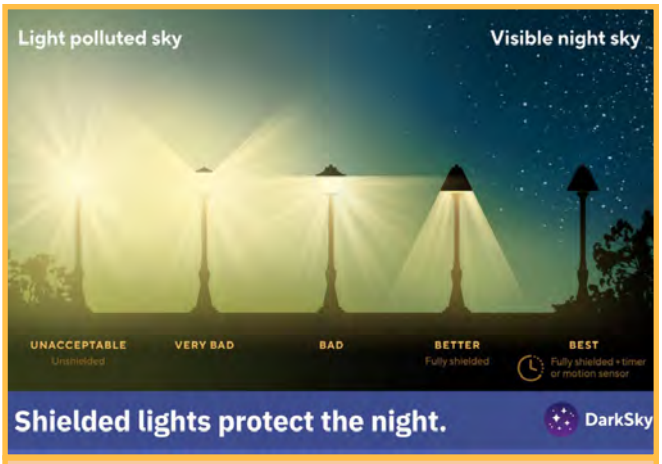


Figure 115. Lighting illustration by DarkSky.

2. SJTPO sidewalk data: https://njogis-newjersey.opendata.arcgis.com/search?q=sjtpo%20sidewalk%20data
3. https://safety.fhwa.dot.gov/roadway_dept/night_visib/docs/Pedestrian_Lighting_Primer_Final.pdf

Conclusion

Pennsville Township is well-located along the Delaware River and hosts an attractive waterfront, a popular state park with ferry connectivity to Delaware, and local attractions (Figure 116). Local officials interested in making it safer and easier for tourists to bike through the Township, and for residents to reach local recreation facilities applied to the CSTA Program to audit current conditions and develop recommendations for potential improvements. The project also included a temporary demonstration component, allowing the Township to trial speed management and pedestrian safety features. The temporary demonstration on Riviera Drive successfully illustrated that targeted Complete Streets interventions can effectively reduce vehicular speeds and enhance safety for non-motorized roadway users in Pennsville.

This report identifies several recommendations that could improve pedestrian and bicycle access to destinations and discourage unsafe driving behaviors using a range of designs consistent with the New Jersey Complete Streets Design Guide. Shared streets, bicycle lanes, bicycle paths, curb extensions, green infrastructure, lighting, and modifications to striping could improve the walkability and bikeability of the area while encouraging more people to walk and bike for transportation. Thanks to extensive feedback provided by residents through an online questionnaire, Pennsville is now better equipped to move forward with improvements that enhance safety. Prioritizing these data-driven improvements will ensure that residents and visitors can safely and comfortably navigate between Pennsville's parks, schools, and waterfront properties.

Some of the recommendations can be implemented during periodic maintenance, such as upgrading crosswalk striping and adding enhanced bicycle striping during routine roadway resurfacing. More intensive and costly roadway changes, such as curb extensions, stormwater tree pits, and green infrastructure, may be best suited for competitive funding grants. A list of funding sources that can be used by municipalities to implement pedestrian and bicycle improvements is included as Appendix B.

While the recommendations in this plan were limited to eleven roadways, Pennsville should identify additional roadways that can receive similar treatments to improve safety throughout the entire Township.



Figure 116. Residents enjoying the Pennsville waterfront.



Appendix

A. Online Questionnaire

B. Potential Funding Resources

C. Design Resources

A. Online Questionnaire

This questionnaire is intended to get local input on temporary safety improvements installed on Riviera Drive between Cornell Road and Fordham Road. This temporary demonstration will be in place from November 5 to December.

The purpose of the demonstration is to address traffic safety concerns along Riviera Drive and to improve pedestrian access to the riverfront trail and playground. If these improvements are successful, they could be made permanent, and similar installations could be added along other roadways in Pennsville. Since the installation is temporary, it is easy to remove it or modify it. To view the project flyer, click here (PDF).

This demonstration is being conducted along with the development of a Bicycle Network Plan through the Complete Streets Technical Assistance program (a partnership of the Voorhees Transportation Center at Rutgers, Sustainable Jersey, and the South Jersey Transportation Planning Organization). The goal of the plan is to improve roadway safety and bicycle connectivity between Riverview Beach Park and Fort Mott State Park. To learn more about the program, visit SJTPO's webpage here or Sustainable Jersey's webpage here. Your participation in this questionnaire is voluntary. By completing this questionnaire, you will be contributing to knowledge surrounding the use, community perspective, and safety of pedestrian and bicyclist infrastructure in Pennsville, NJ. If you choose to take part now, you may exit the questionnaire at any point. In addition, you can choose to skip questions that you do not wish to answer. If you do not click on the 'submit' button after completing the form, your responses will not be recorded. If you do not wish to take part in the research, close this webpage.

For questions about this project, contact Pennsville Emergency Management Coordinator Steve Krough at 856-678-3089 ext: 5159 or via email at pvpdoem@pvtwp.com. If you have questions about this questionnaire, you can contact bikeped@ejb.rutgers.edu

I acknowledge that I have read and understand the information. I agree to take part in the research, with the knowledge that I am free to withdraw my participation without penalty.

Click on the "Start Survey" button to confirm your agreement to participate in the questionnaire.

End of Block: Default Question Block

Start of Block: Block 1

Q2 Are you a... (**select all that apply**)

- [ ] Pennsville resident, living along Riviera Drive
- [ ] Pennsville resident, living elsewhere in Pennsville
- [ ] Student at a local school
- [ ] Municipal Employee / Police Officer / Councilperson in Pennsville
- [ ] Work or own a business in Pennsville
- [ ] Visitor
- [ ] Other

Q3 How often do you visit Riviera Drive, between Cornell Road and Fordham Road?

- O Daily
- O Frequently (several times per week)
- O Infrequently (less than once a week)
- O Have only visited once

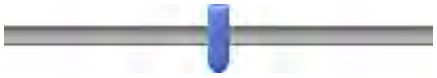
Q4 How do you usually travel along Riviera Drive, between Cornell Road and Fordham Road? (**Select all that apply**)

- [ ] Walking (including with a mobility device like a walker or wheelchair)
- [ ] Bicycling / Scootering
- [ ] Driving
- [ ] Passenger in a car or bus

Q5 How would you rate walking (including with a mobility device like a walker or wheelchair) safety of Riviera Drive **before** the demonstration:

	Unsafe			Neutral				Safe		
	0	1	2	3	4	5	6	7	8	9	10
Move slider to select your answer											

Q45 How would you rate the bicycle and e-scooter safety of Riviera Drive **before** the demonstration:

	Unsafe			Neutral				Safe		
	0	1	2	3	4	5	6	7	8	9	10
Move slider to select your answer											

Q49 How would you rate driving safety of Riviera Drive **before** the demonstration:

	Unsafe			Neutral				Safe		
	0	1	2	3	4	5	6	7	8	9	10
Move slider to select your answer											

Q47 The temporary demonstration narrowed the roadway between Cornell Road and Fordham Road. Curb extensions were added to reduce the crossing distance for pedestrians, narrow the roadway to reduce speeds, and improve sightlines by helping to enforce existing parking prohibitions near the intersection. Striping at crosswalks was added to improve the visibility of pedestrians. Vehicle access to residences, the boat launch, and the parking lot was not impacted.

Q7 Compared to how Riviera Drive was before the demonstration, do you think the temporary changes made the roadway:

	More safe	No change	Less safe	Did not experience before change
For pedestrians (including with a mobility device like a walker or wheelchair)	O	O	O	O
For bicyclists and e-scooters	O	O	O	O
For drivers	O	O	O	O

Q8 Use this space if you would like to tell us how you feel the temporary change has, or has not, impacted safety:

_____

_____

Q9 Compared to how Riviera Drive was before the demonstration, do you think the temporary changes made the roadway:

O More attractive/welcoming

O No change

O Less attractive/welcoming

O Did not experience before

Q10 Use this space if you would like to tell us how you feel the temporary change has, or has not, impacted the attractiveness or welcoming feeling of the area:

_____

_____

Q50 Do you think the tested changes should be made permanent?

O Yes

O No

Q51 Use this space if you would like to tell us why:

_____

_____

Q11 Which other permanent infrastructure changes, if any, would you like to see along Riviera Drive? (**Select all that apply**)

- ☐ Painted crosswalks
- ☐ Curb extensions at corners
- ☐ Bicycle lanes
- ☐ Speed bumps
- ☐ Trees
- ☐ Other _____
- ☐ No changes

Q12 Use this space if you would like to tell us why:

_____

_____

Q25 Do you have any other comments or ideas on improving roadway safety along Riviera Drive that you would like to share?

_____

_____

Q16 What year were you born?

O Enter year _____

Q17 Which race/ethnicity best describes you? (Select **all** that apply.)

- ☐ American Indian or Alaska Native
- ☐ Asian or Asian American
- ☐ Black or African American
- ☐ Hispanic or Latino
- ☐ Native Hawaiian or other Pacific Islander
- ☐ White or Caucasian
- ☐ Prefer not to say

Q19 Which most closely describes your gender?

- O Male
- O Female
- O Non-binary / Non-conforming
- O Not listed
- O Prefer not to answer

Q15 Any other comments or input you would like to share?

_____

_____

B. Potential Funding Resources

This appendix provides a list of grant programs available to New Jersey communities for the advancement of Complete Streets initiatives, including both infrastructure and non-infrastructure projects, and programs to increase walking and bicycling. A table has been included that lists the most common grant sources for Complete Street related projects. This appendix also includes links to two online databases with additional funding sources. The grants listed are highly competitive; grant application requirements should be carefully reviewed before deciding to apply. Incomplete grant applications may be automatically rejected. The most successful applications tell the story of the populations most in need of the proposed improvements, especially traditionally underserved or vulnerable populations. Applications should use compelling pictures, data, and other documentation, and indicate how and why the project was selected.

Federal Highway Administration-Administered Federal Aid Infrastructure Grant Programs

The Bipartisan Infrastructure Law (BIL), also known as the Infrastructure Investment and Jobs Act of 2021 (IIJA), and the Inflation Reduction Act of 2022 (IRA) established new funding programs that can be helpful for county and municipal governments looking to fund Complete Streets and other safety and active transportation projects. The new funding generally requires a 20 percent local match on a cost-reimbursement basis. In other words, for every dollar spent within the grant's budget, up to 80 cents will be eligible for reimbursement by the federal government. Eligible entities apply for grants directly to the United States Department of Transportation through the grants.gov online portal.

Safe Streets and Roads for All Program (SS4A): This program was established out of the Infrastructure Investment and Jobs Act of 2021 (IIJA). It funds planning and implementation of projects and strategies which share a goal of eliminating roadway deaths and serious injuries. Many Complete Streets-related measures are eligible. Funding can be used to produce a comprehensive safety action plan, undergo demonstration projects, and implement permanent measures. Congress has appropriated $5 billion to the program through fiscal year 2026, and all grants require a 20 percent local match. The SS4A program supports the National Roadway Safety Strategy and the United States Department of Transportation's goal of zero deaths and serious injuries on our nation's roadways. Counties, municipalities, and other non-State government entities are eligible to apply. Applications for the 2026 fiscal year are forthcoming. More information is available here: https://www.transportation.gov/grants/SS4A

New Jersey Department of Transportation

The Division of Local Aid and Economic Development at the New Jersey Department of Transportation (NJDOT) administers funds to local public agencies such as county and municipal governments for construction projects to improve the state's transportation system. Grant support and technical assistance is provided through the Local Aid Resource Center's Help Desk (https://njdotlocalaidrc.com/). The New Jersey Transportation Trust Fund and the 2021 Bipartisan Infrastructure Law provide the opportunity for funding assistance to local governments for road, bridge, and other transportation projects. While NJDOT and the three metropolitan planning organizations that cover the state administer many federal aid programs, including Transportation Alternatives and Safe Routes to School, the USDOT administers some grant programs directly. NJDOT administers state aid programs. Below are some options for funding infrastructure projects through NJDOT.

State Aid Infrastructure Grant Programs

Municipal Aid: This program assists municipalities in funding local transportation projects, and all New Jersey municipalities are eligible to apply. NJDOT encourages applications for pedestrian safety improvements, bikeways, and streetscapes. Additionally, a common strategy to implement on-street bike lanes is to include bike lane striping within repaving projects that are funded through this program. Learn more here: https://njdotlocalaidrc.com/state-funded-programs/municipal-aid (typical application window: April - July)

County Aid: County Aid funds are available for the improvement of public roads and bridges under county jurisdiction. Public transportation and other transportation projects are also included. Learn more here: https://njdotlocalaidrc.com/state-funded-programs/county-aid (application window: August - December)

Bikeways: This program provides funds to counties and municipalities to promote bicycling as an alternate mode of transportation in New Jersey. A primary objective of the Bikeway Grant Program is to support the State's goal of constructing 1,000 new miles of dedicated bike paths that are physically separated from vehicle traffic. Learn more here: https://njdotlocalaidrc.com/state-funded-programs/bikeways (typical application window: April - July)

Safe Streets to Transit: This program encourages counties and municipalities to construct safe and accessible pedestrian linkages to all types of transit facilities and stations, to promote increased usage of transit by all segments of the population and decrease private vehicle use. Learn more here: https://njdotlocalhub.com/local-aid-econ-dev/grant-programs/state-programs/safe-streets-to-transit/(typical application window: April - July)

Transit Village: This program awards grants for transportation projects that enhance walking, biking, and/ or transit ridership within a ½ mile of the transit facility. Municipalities must already be designated as a Transit Village by the NJDOT Commissioner and the inter-agency Transit Village Task Force to be eligible to apply. Learn more here: https://njdotlocalaidrc.com/state-funded-programs/transit-village

Other NJDOT Assistance

Bicycle and Pedestrian Planning Assistance (BPPA): NJDOT offers local planning assistance through the Bureau of Safety Improvement Programs. Under the BPPA program, on-call consultants are paired with communities to complete a variety of projects, including bicycle and pedestrian plans, safety assessments, trail feasibility studies, and improvement plans for traffic calming projects. Priority is given to traditionally underserved communities and those with a documented safety concern. For more information, please contact the NJDOT Bicycle and Pedestrian Coordinator at bikeped@dot.nj.gov.

State-Administered Federal Aid Infrastructure Grant Programs

Transportation Alternatives Program: The Transportation Alternatives Program is a set-aside of the Surface Transportation Block Grant Program, and it is sometimes referred to as TA Set-Aside. It provides federal funds for community-based "non-traditional" transportation projects designed to strengthen the cultural, aesthetic, and environmental aspects of the nation's intermodal system. Municipalities can receive bonus points on the grant if they have an adopted Complete Street Policy, are a Targeted Urban Municipality, or are a designated Transit Village. Learn more here: https://njdotlocalhub.com/local-aid-econ-dev/grant-programs/federal-programs/transportation-alternatives/

Safe Routes to School: The Safe Routes to School Program is funded through the Federal Highway Administration's (FHWA) Federal Aid Program and is being administered by the NJDOT, in partnership with the North Jersey Transportation Planning Authority (NJTPA), the Delaware Valley Regional Planning Commission (DVRPC), and the South Jersey Transportation Planning Organization (SJTPO). The program provides federal funds for infrastructure projects that enable and encourage children in grades K-12, including those with disabilities, to safely walk and bicycle to school. Applicants can receive bonus points on the grant if they have School Travel Plans, a Complete Streets Policy, and Transit Village designation. Learn more here: https://njdotlocalaidrc.com/federally-funded-programs/safe-routes-to-school

Recreational Trails Program: The Recreational Trails Grant Program administered by the NJDEP Green Acres Program provides federal funds for developing new trails and maintaining and restoring existing trails and trail facilities including trails for non-motorized, multi-use (including land and water) and motorized purposes. The program is currently on hold as it undergoes revisions. Learn more and get notified of future grant opportunities here: https://dep.nj.gov/greenacres/trails-program-home/

Health and Environment Funding

Sustainable Jersey: The Sustainable Jersey Small Grants program provides capacity building awards to municipalities to support local green teams and their programs and is not project specific. Learn more about grant opportunities here: https://www.sustainablejersey.com/grants/

Sustainable Jersey for Schools: Sustainable Jersey for Schools grants are intended to help districts and schools make progress toward Sustainable Jersey for Schools certification. Learn more here: http://www.sustainablejerseyschools.com/

Funding from Other Sources

Various other funding sources exist that may help municipalities further Complete Streets projects. Both Sustainable Jersey and Together North Jersey have developed comprehensive online databases that catalog the many funding sources available. They can be found at the following locations:

New Jersey Transportation Infrastructure Bank (NJTIB): The NJTIB is an independent State Financing Authority responsible for providing and administering low interest rate loans to qualified municipalities, counties, and regional authorities in New Jersey. The unique partnership with NJDOT was established with the mission of reducing the cost of financing transportation projects in the state. Learn more here: https://www.njib.gov/njtib

County and Municipal Capital Programs: In the case where alternative funds are not available but there is community consensus and political will to move forward with a project, county and municipal capital programs should be considered. Local budgets may have the ability to support some projects, especially if other state and federal programs provide budget relief in other areas.

County and Municipal Open Space Trust Funds: All New Jersey counties and many New Jersey municipalities have an Open Space Trust Fund, which is a dedicated program supporting open space land acquisition. The trust funds are established by ballot measure. Depending on the fund parameters, other development projects can be eligible including trails, historical preservation, and farmland protection. For a database of ballot measures descriptions with amount of Open Space Trust Funds, visit the Trust for Public Lands LandVote Database. https://tpl.quickbase.com/db/bbqna2qct?a=dbpage&pageID=8

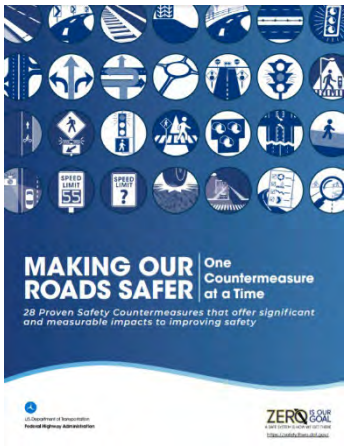
C. Guidance Documents

ADA Guidelines

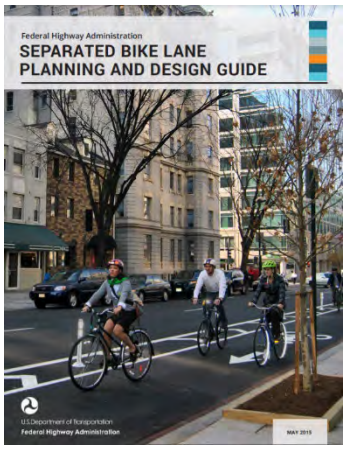


[ADA Standards for Accessible Design]

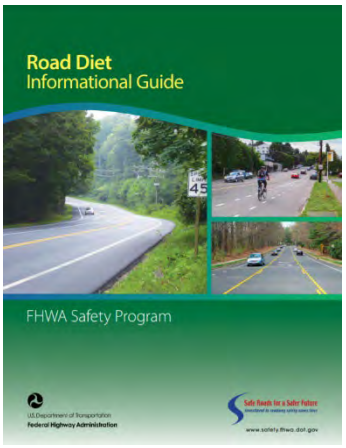
FHWA Guides



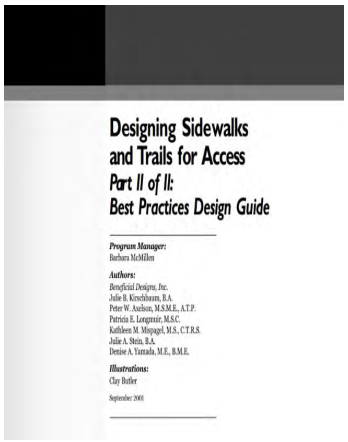
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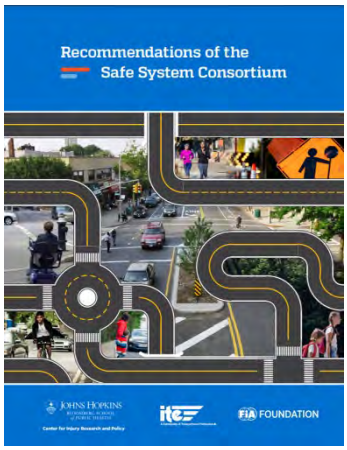
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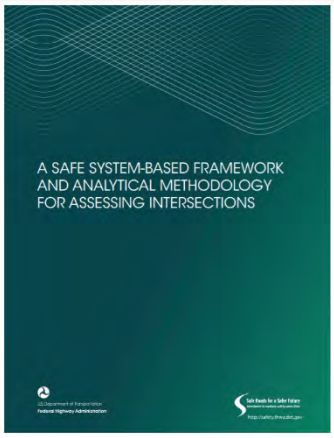
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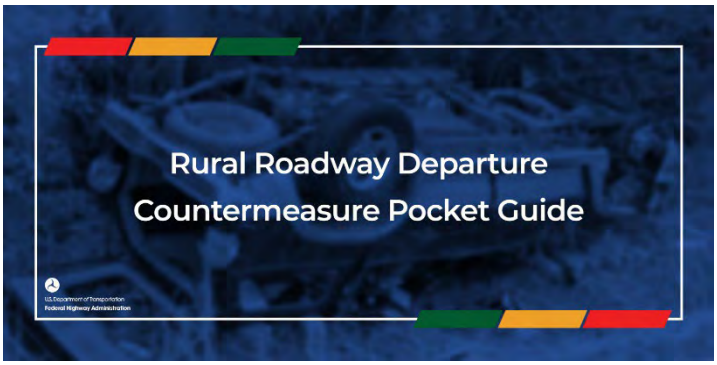
[Designing Sidewalks and Trails for Access Part II of II: Best Practices Design Guide]



[Recommendations of the Safe System Consortium]



[A Safe System-Based Framework and Analytical Methodology for Assessing Intersections]

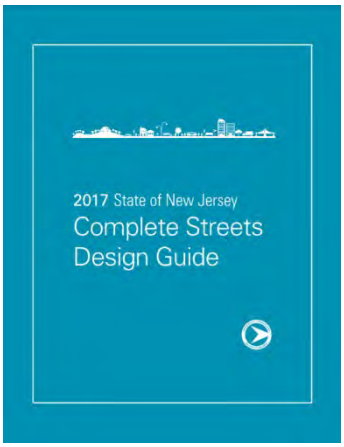


[Rural Roadway Departure Countermeasure Pocket Guide]

NJDOT Guides



[Complete & Green Streets for All: Model Policy & Guide]



[2017 State of New Jersey Complete Streets Design Guide]



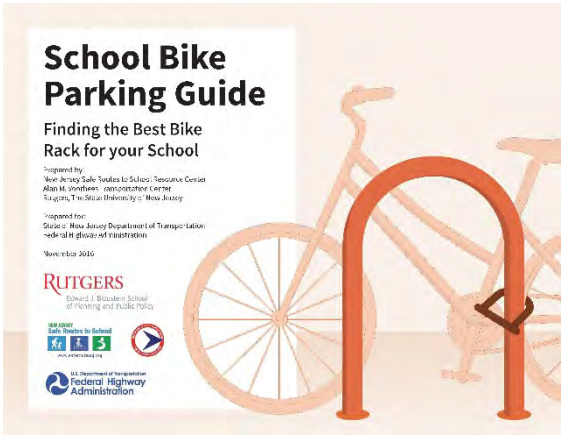
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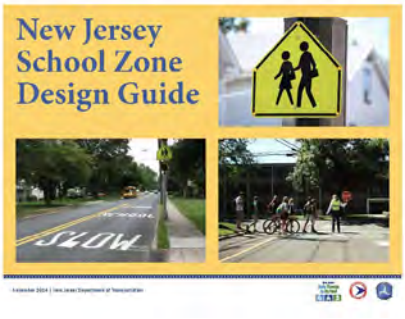
[A Guide to Policy Development]



[Advancing Complete Streets for Neurodivergent Individuals]



[School Bicycle Parking Guide]

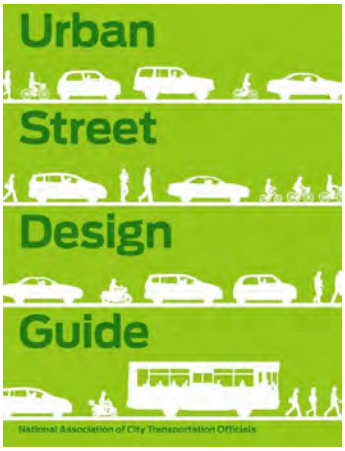


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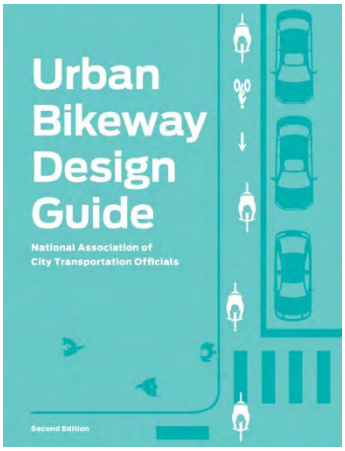


[New Jersey Micromobility Guide]

NACTO Guides



[Urban Street Design Guide]



[Urban Bikeway Design Guide]



[Transit Street Design Guide]



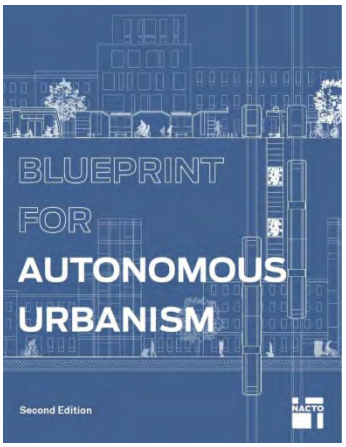
[Urban Street Stormwater Guide]



[Global Street Design Guide]



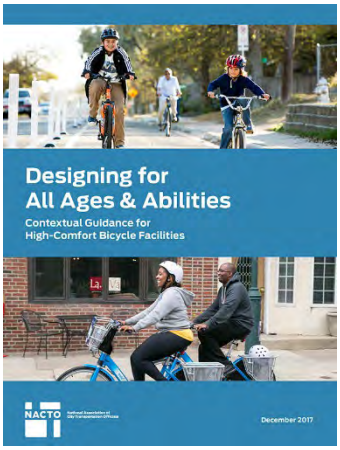
[Designing Streets for Kids]



[Blueprint for Autonomous Urbanism]



[Bike Share Station Siting Guide]

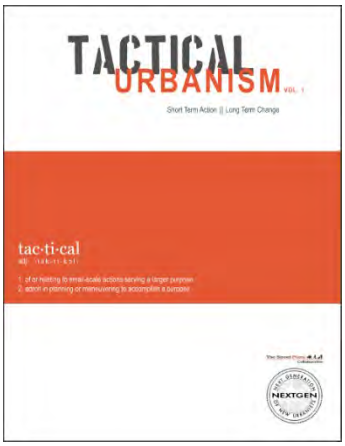


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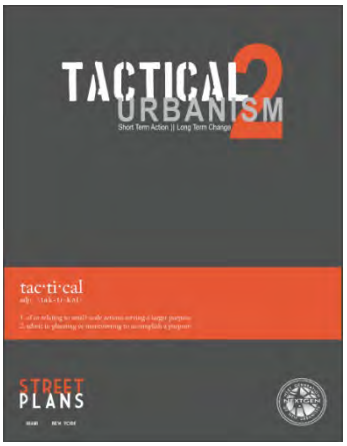


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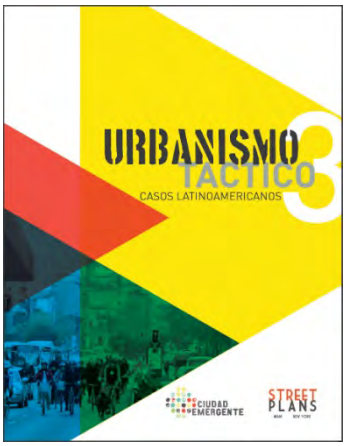
Tactical Urbanism Guides



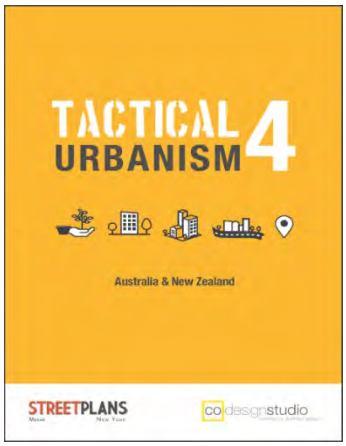
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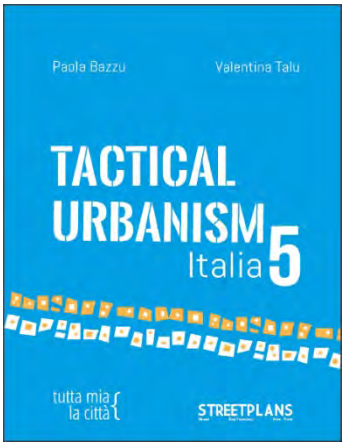
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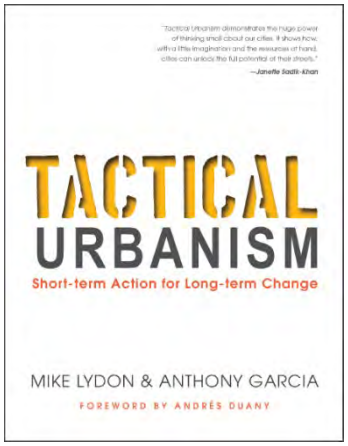
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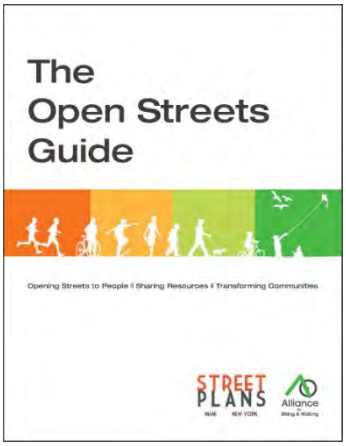
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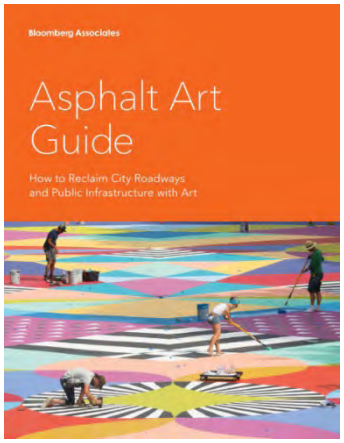
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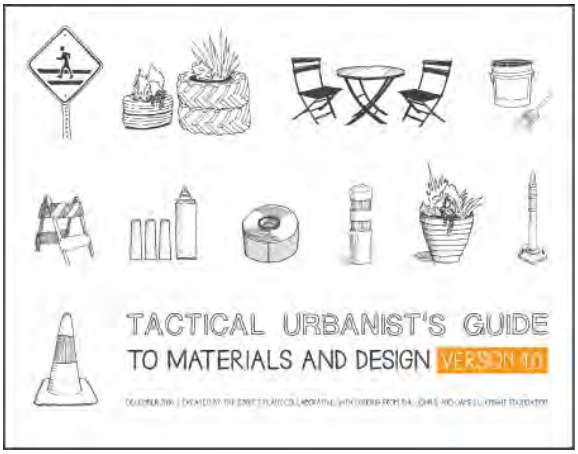
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[The Open Streets Guide]



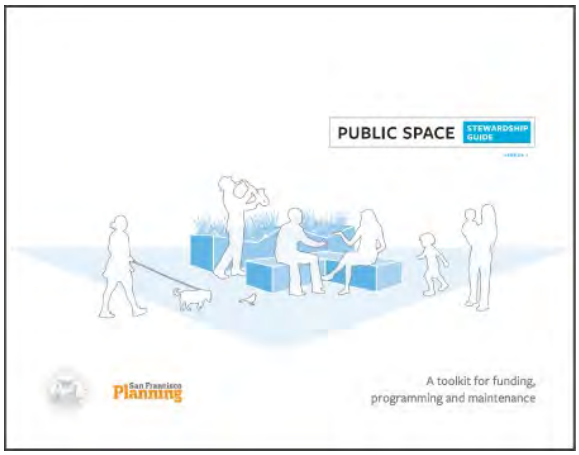
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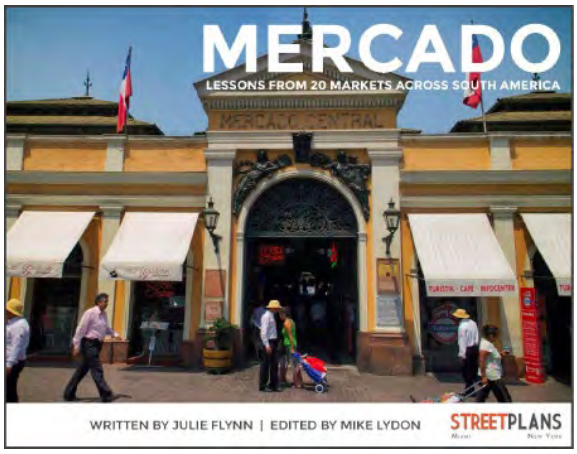
[Tactical Urbanist's Guide to Materials and Design]



[Fast-Tracked: A Tactical Transit Study]



[Public Space Stewardship Guide]



[Mercado: Lessons from 20 Markets Across South America]