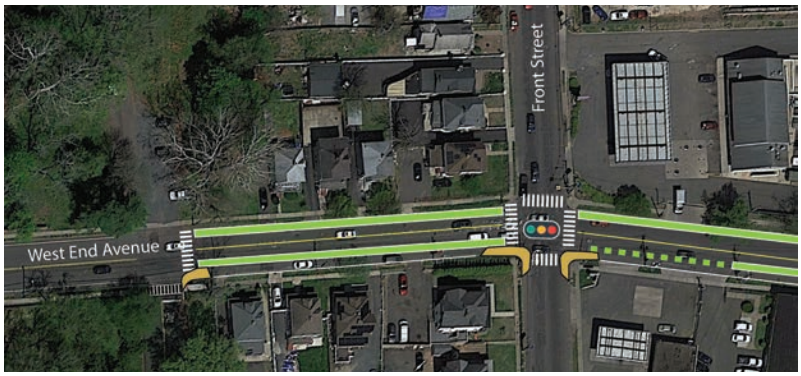

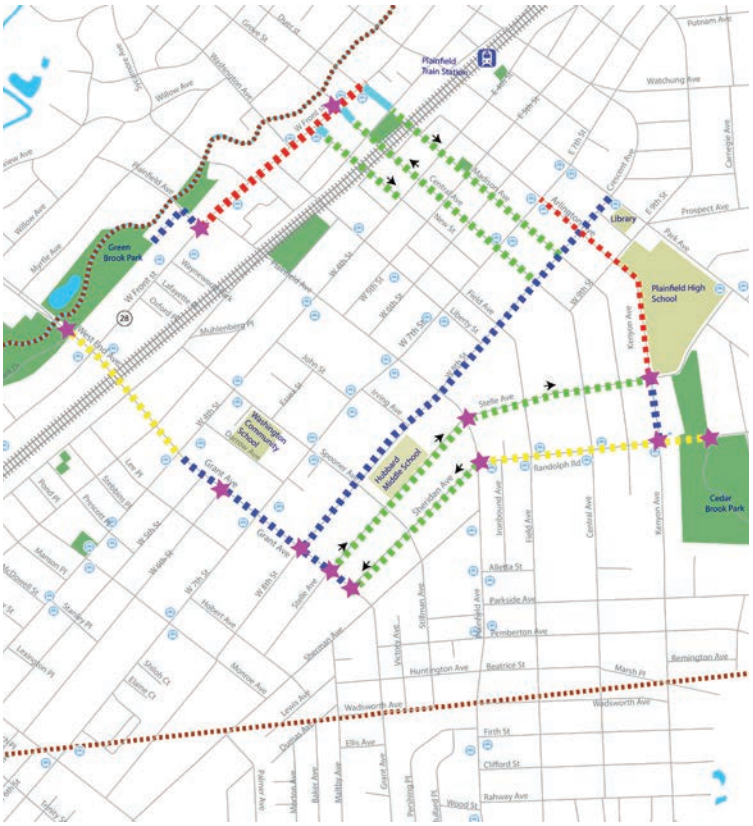

Bicycle Network Plan For Wards 3 and 4

City of Plainfield, Union County, NJ

2023

NJTPA
NORTH JERSEY TRANSPORTATION PLANNING AUTHORITY

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About the Report

This report has been prepared as part of the North Jersey Transportation Planning Authority (NJTPA) 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 NJTPA 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 NJTPA.

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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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.

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North Jersey Transportation Planning Authority

The North Jersey Transportation Planning Authority (NJTPA) is the federally authorized Metropolitan Planning Organization for 7 million people in the 13-county northern New Jersey region. Each year, the NJTPA oversees more than $2 billion in transportation improvement projects and provides a forum for interagency cooperation and public input. It also sponsors and conducts studies, assists county planning agencies, and monitors compliance with national air quality goals.

North Jersey Transportation Planning Authority
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Table of Contents

Executive Summary

> *Complete Streets are streets designed for all users, all modes of transportation, and all ability levels. They balance the needs of drivers, pedestrians, bicyclists, transit riders, emergency responders, and goods movement based on local context.*
>
> **-State of New Jersey Complete Streets Design Guide**

The City of Plainfield, New Jersey, participated in the 2022-2023 North Jersey Transportation Planning Authority (NJTPA) Complete Streets Technical Assistance (CSTA) Program. This report identifies several recommendations to promote bicycling and walking as a means of travel by creating a "loop" through Plainfield's 3rd and 4th Wards. This plan helps connect residents, parks, businesses, schools, and other points of interest by identifying which forms of bicycle infrastructure are feasible to add in a constrained urban environment. The report also recommends improvements for pedestrians.

The recommendations in this report were developed through a series of conversations with City officials and staff, culminating in a public workshop held on March 9, 2023. During this workshop, members of the public were able to review a draft of the overall route along with detailed recommendations for four distinct segments. The feedback obtained during this meeting is reflected in this report.

Many of the recommendations in this report can be implemented by reallocating roadway space through new striping and signage. These improvements could be implemented quickly and at a relatively low cost by the municipality. Other recommendations will require a detailed engineering study, funding, and the support of local, county, and state officials. These projects would take more time but have the potential to make Plainfield a more accessible and attractive community for bicyclists and pedestrians. Aside from facilitating bicycle travel, many of the recommendations aim to improve overall traffic safety by discouraging speeding and improving the safety of pedestrian crossings.

Background

The NJTPA created the CSTA Program in 2018 to assist municipalities in advancing or implementing Complete Streets, a need identified by the Together North Jersey consortium. This report is part of the third round of the CSTA Program, in which seven municipalities were selected to receive technical assistance. Municipalities were chosen for the program through a competitive application process based on the following criteria: the need for technical assistance, commitment to project implementation, opportunity for public engagement, and the strength of their respective municipal teams. In addition, projects at locations with high crash rates and projects with the potential to involve and benefit traditionally underserved populations were given additional consideration.

In their application, Plainfield requested help to design four "loops" within the City for walking and bicycling, with the intention of having one in each ward. The City's 2020 Municipal Master Plan noted that 20 percent of residents lack access to a vehicle and that it is important to create safe and convenient travel options for those residents. In addition, the Master Plan stated a need for recreational space in the City, finding that only three percent of the City's land was dedicated to open space. To this end, the "loops" would create a new recreational option in addition to providing an important transportation link.

The CSTA project team met with Plainfield staff in March 2022 to discuss the application and to determine if it was possible to narrow the focus, as the proposed project was too broad to be completed within the CSTA program. Plainfield staff agreed to limit the project to a single "loop" serving Wards 3 and 4, which they felt had the most pressing needs. In a subsequent meeting, the project team worked with the Plainfield project team to identify a potential route that would provide coverage to important destinations within those wards, including Green Brook Park, Cedar Brook Park, Plainfield High School, Hubbard Middle School, the library, and Front Street businesses. The CSTA team then looked at existing conditions on a block-by-block basis to determine if bicycle facilities were feasible or if an alternative route would need to be developed. While the focus of the study was on bicycling routes, the CSTA team paid close attention to ways in which pedestrian safety and comfort could be improved along the route.

These recommendations were presented to the public as part of a workshop on March 9, 2023 at the Plainfield Senior Center (Figures 1 and 2). The project team started the meeting by presenting an overview of bicycle infrastructure types based on the New Jersey Complete Streets Design Guide. Then the team gave an introduction to the overall route before breaking out into discussion tables where participants could review detailed maps and give comments. Feedback from that meeting helped inform the final recommendations presented in this report, including a desire to direct bicyclists to 8th Street instead of 7th Street. Members of the public also spoke about the need to improve sidewalks and restore pedestrian amenities such as benches throughout the City.

Figure 1. Mayor Mapp addresses attendees at the March 9, 2023 public meeting.

Figure 2. Members of the public review the proposed plans at the March 9, 2023 public meeting.

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 3). Everyone includes all roadway users and all travel modes—pedestrians, cyclists, transit users, freight, and travelers of all ages and abilities.

Section 11206 of the new 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, 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 3).

Figure 3. This Complete Street in New Brunswick, NJ, features a bicycle path, bus lane, and enhanced pedestrian crossing.

Regardless of the context, Complete & Green Streets should be designed to improve safety for pedestrians and bicyclists who are the most vulnerable road users. Reduced speed limits, raised medians, and other design elements can help create a safer environment for seniors, children, and people with disabilities. 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 40 mph as being fatal 85 percent of the time. Comparatively, at 30 mph, pedestrian fatality rates drop to 45 percent, and at 20 mph they are down to five percent (Figure 4 and Figure 5). Complete & Green Streets recognize that all transportation network users, whether traveling by car, bus, train, or taxi, become pedestrians at some point during their journey.

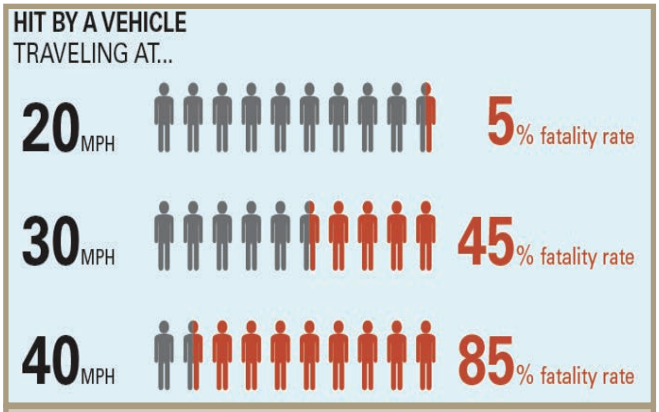


Figure 4. Graphic showing increased fatality rate as vehicle speeds increase. (USDOT)

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. The Safe System Approach refocuses transportation system design and operation on anticipating human errors and reducing impact forces to minimize crash severity and save lives. Under this approach, 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.

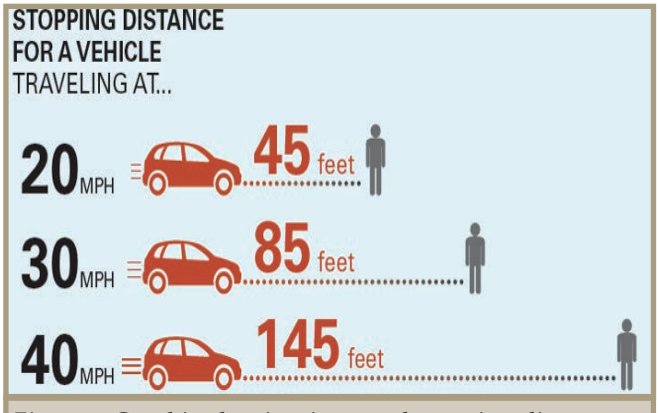


Figure 5. Graphic showing increased stopping distance as vehicle speeds increase. (USDOT)

Benefits of Complete Streets

While the primary benefit of Complete & Green 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, and transit riders (Figure 6). 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 6. 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, New Jersey attracted new businesses and helped to revitalize a struggling business corridor (Figure 7). 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 7. Division Street in Somerville was converted into a popular pedestrian plaza.

Transportation Equity

Fair and equitable distribution of transportation investments is a fundamental principle of Complete Streets. All users of the transportation system should benefit from our shared streets regardless of income, ethnicity, 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.

Complete Streets in New Jersey and Plainfield

New Jersey is a leader in the Complete Streets movement. In 2009, NJDOT was among the first state DOTs in the nation to adopt an internal Complete Streets policy. Since 2009, NJDOT has funded six Complete Streets Summits and over 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 *Complete And Green Streets for All: Policy and 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 new 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, 174 municipalities have implemented their own policies (Figure 8).

The City of Plainfield passed a Complete Streets policy on March 14, 2022. Union County does not have a policy.

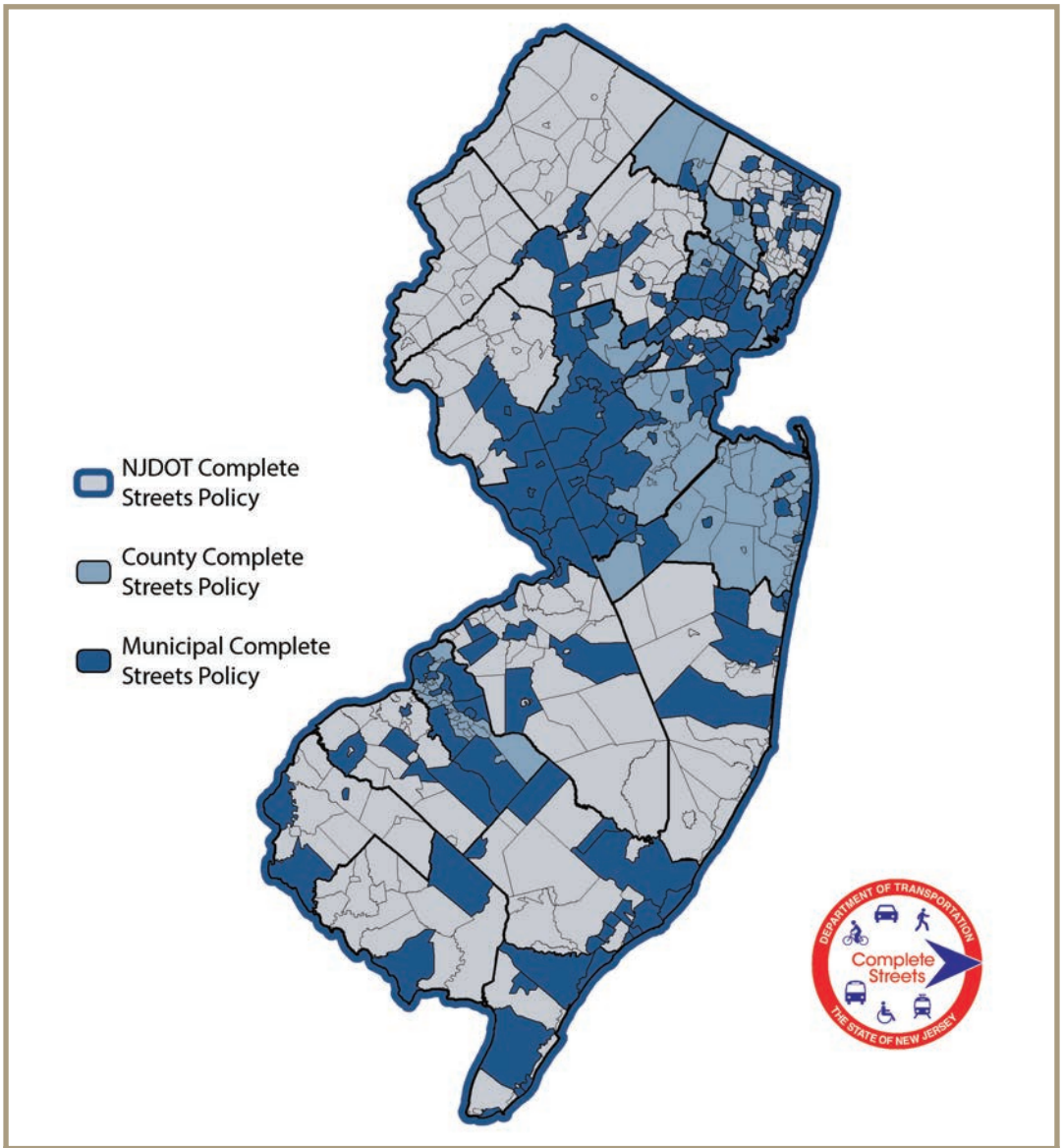


Figure 8. Complete Streets Policies in New Jersey, as of June 15, 2023. Visit https://njbikeped.org/nj-complete-streets-policy-compilation/ *for a constantly updated list of policies.*

Study Area

According to the 2020 US Census, the City of Plainfield is home to approximately 54,586 residents within an area of 5.97 square miles. The median age is 30.8, and the estimated median household income is $63,754. Plainfield is home to a high population of Hispanic residents, 51.3 percent compared to 20 percent statewide. In addition, 37.2 percent of Plainfield residents were born outside the United States.

Located at the edge of Union County, the City is bordered by nine municipalities. Scotch Plains is located to the north and east, and Fanwood to the northeast. The southern border of the City is also the edge of Middlesex County, which contains South Plainfield and Piscataway to the south; Dunellen to the southwest; and Edison to the southeast. Green Brook Township, in Somerset County, lies to the northwest, along with North Plainfield and Watchung. The 3rd and 4th wards make up the westernmost part of the City and are mostly residential. Front Street, which comprises the commercial main street of the City, starts in the study area and extends northeast. The City hosts two NJ TRANSIT train stations, but both are outside the study area.

The corridors the project team analyzed are shown in Figure 9 and listed below. Not all roadways were found to be suitable for bicycle infrastructure and as such, are not included in the recommendations.

- West End Avenue / Grant Avenue between Park Drive and Sheridan Avenue
- 7th Street between Grant Avenue and Arlington Avenue
- 8th Street between Grant Avenue and Arlington Avenue
- Stelle Avenue between Grant Avenue and Kenyon Avenue
- Sheridan Avenue / Randolph Road between Grant Avenue and Cedar Brook Park
- Kenyon Avenue between Randolph Road and 7th Street
- Madison Avenue between 8th Street and West Front Street
- Central Avenue between 8th Street and West Front Street
- New Street between 8th Street and West Front Street
- West Front Street between Madison Avenue and Plainfield Avenue
- Geraud Avenue between Front Street and Brookside Place

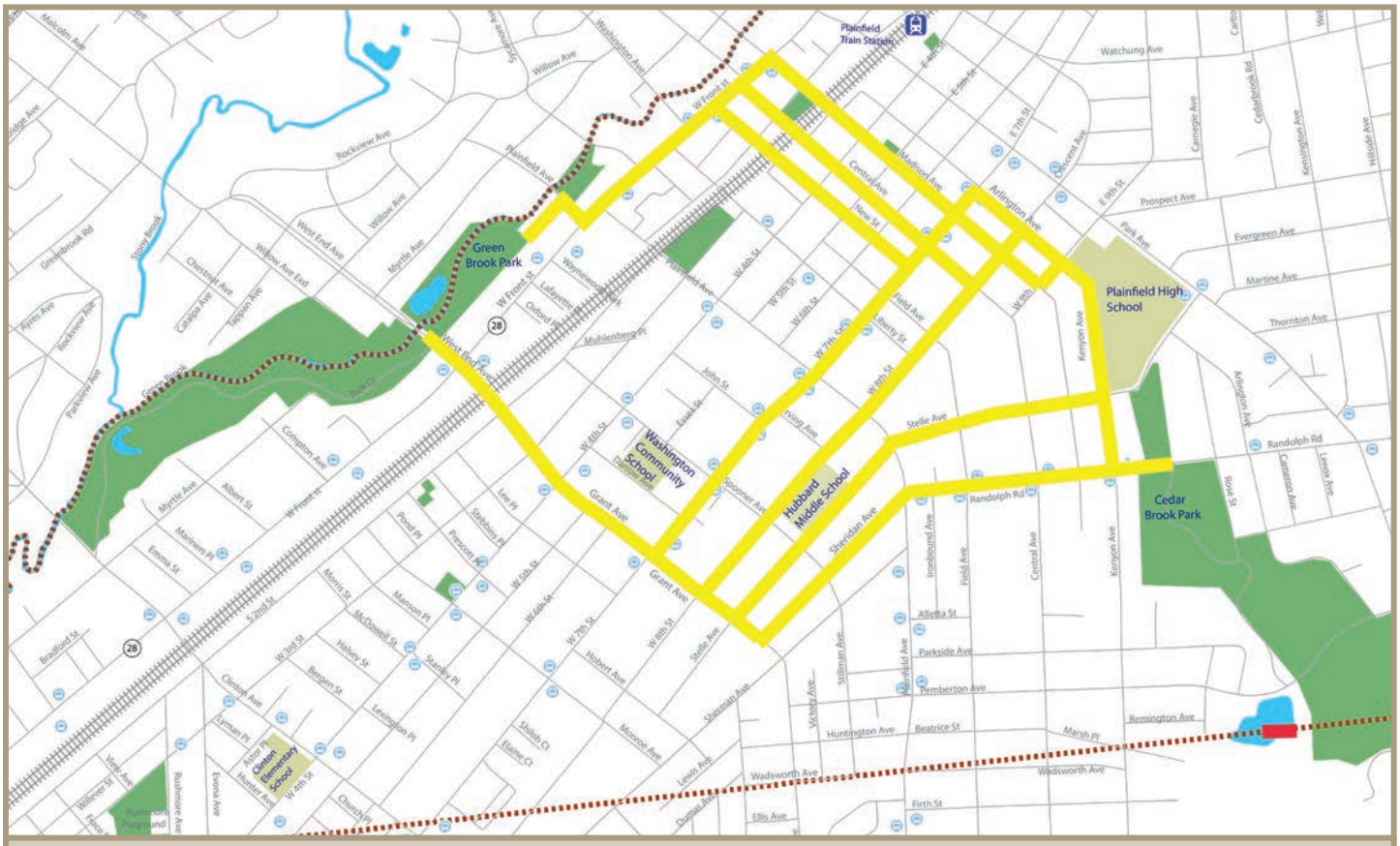


Figure 9. Plainfield Study Area. Corridors in yellow were evaluated by the project team for suitability as part of the bicycle loop.

Crash History

According to NJDOT crash data, during the five years between 2017 and 2021, there were 35 crashes involving a pedestrian and 13 involving a bicyclist along the study corridors. Two of the crashes involved a fatality. As shown in Table 1 on the next page, most of the crashes happened at an intersection. A notable exception is the northern segment of West Front Street in the vicinity of New Street, Central Avenue, and Madison Avenue, where multiple crashes occurred outside of crosswalks. Over a third of the crashes occurred after dark, indicating the potential safety benefit that could be achieved by providing improved lighting.

The draft map created by the CSTA team included 7th Street as a crosstown connection. During the public meeting, residents expressed concern about the high traffic volumes along that roadway and recommended that the study team shift the route to use 8th Street. The crash data confirms that 7th Street has seen many crashes involving bicyclists and pedestrians in the five-year period. While 7th Street is not detailed in this report, it should be considered for safety improvements.

Bicycling Conditions

The NJTPA prepared a map showing City of Plainfield roads classified by their Level of Bicycle Compatibility (LBC) (Figure 10). This analysis method used roadway design, speed limits, number of lanes, and truck volumes to categorize all roads and trails into one of five groups. Most roadways in Plainfield are LBC 2. West Front Street is LBC 4 where it is State Route 28. Adding infrastructure can change the comfort level. The categories are:

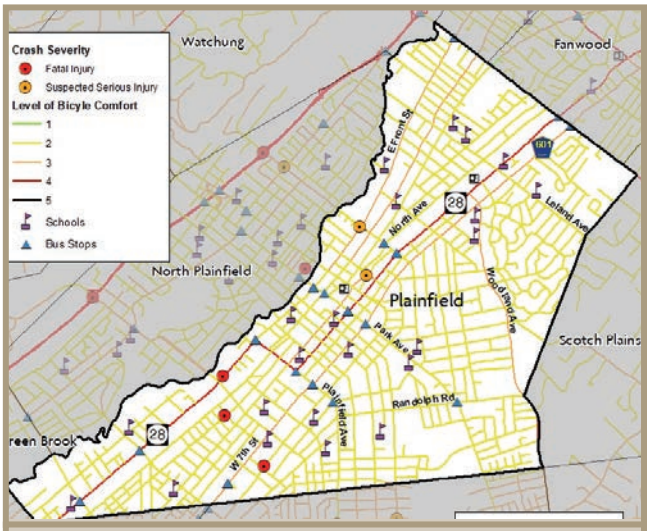


Figure 10. Plainfield Level of Bicycle Compatibility Map.

- LBC 1: Little to no stress. Suitable for all cyclists, including children.
- LBC 2: Little traffic stress. Suitable for most adult cyclists, but more challenging for children.
- LBC 3: Moderate traffic stress. Comfortable for those who already ride bicycles.
- LBC 4: High traffic stress. Only for very experienced bicyclists.
- LBC 5: Unable to classify or unsuitable for bicycling.

Traffic Volumes and Speed

Traffic counts are not available for most of the roadways within the study area. NJDOT has recorded annual average daily traffic (AADT) volumes at the following locations relevant to this report:

- Front Street south of Grant Avenue
  - 9,997 in 2019
- Grant Avenue between Front Street and 2nd Street
  - 2,505 in 2018
  - 9,908 in 2019
- Plainfield Avenue between Sheridan Avenue and Sherman Avenue
  - 7,721 in 2017
  - 6,687 in 2020
- Central Avenue between 7th Street and 6th Street
  - 6,647 in 2019

Posted speed limits in the study area are 25 mph, except West End Avenue, which is 35 mph. Speed limits and traffic volumes help determine what type of bicycle infrastructure is suitable. The New Jersey Complete Streets Design Guide states that any type of bicycle facility can be installed on a 25 mph roadway with traffic volumes under 2,500. However, if volumes exceed 2,500, shared-lane markings (sharrows) should only be used with other measures to discourage cut-through traffic. On busier roads, fully separated bicycle facilities are recommended.

Table 1. Pedestrian and bicycle crashes in study area, 2017-2021.

Location	Date	Crash Type	Ped./Cyclist Age	At Intersection	Lighting Condition
Grant & Front	February 2017	Pedestrian	Adult	Yes	Dark (Streetlights on)
Grant & Front	September 2018	Pedestrian	Adult	Yes	Daylight
Grant & Front	August 2019	Bicyclist	Unknown	Yes	Daylight
Grant & Front	November 2021	Bicyclist	Adult	Yes	Dawn
Grant & 2nd	January 2019	Pedestrian	Adult	Yes	Dark (Streetlights on)
Grant & 3rd	January 2019	Pedestrian	Adult	Yes	Dark (Streetlights on)
Grant & 4th	September 2018	Pedestrian	Adult	Yes	Dark (Streetlights on)
Grant & 4th	September 2018	Pedestrian	Unknown	Yes	Dark (Streetlights on)
Grant & 4th	June 2019	Bicyclist	Minor	75 feet W	Daylight
Grant & 5th	September 2017	Pedestrian	Minor	150 feet N	Dark (Streetlights on)
Grant & 7th	March 2017	Pedestrian	Unknown	Yes	Dark (Streetlights on)
Grant & 7th	January 2019	Bicyclist	Adult	Yes	Dawn
8th & Spooner	September 2021	Pedestrian	Minor	Yes	Daylight
Sheridan & Plainfield	February 2019	Pedestrian	Minor	Yes	Dark (Streetlights on)
Sheridan & Plainfield	August 2019	Pedestrian	Adult	Yes	Daylight
Kenyon & Randolph	July 2018	Pedestrian	Adult	Yes	Daylight
9th & Central	February 2018	Pedestrian	Adult	Yes	Dark (Streetlights on)
8th & Madison	June 2018	Pedestrian	Adult	Yes	Daylight
7th & Arlington	September 2017	Pedestrian	Senior	Yes	Dawn
7th & Arlington	January 2019	Pedestrian	Adult	30 feet E	Daylight
7th & Arlington	August 2021	Pedestrian	Adult	Yes	Dark (Streetlights on)
7th & Madison	September 2021	Pedestrian	Adult	Yes	Dawn
7th & Madison	August 2017	Bicyclist	Adult	Yes	Daylight
7th & Central	July 2017	Pedestrian	Adult	Yes	Daylight
7th & Central	August 2021	Bicyclist	Adult	Yes	Daylight
6th & Madison	October 2021	Pedestrian	Adult	Yes	Daylight
5th & Arlington	July 2017	Bicyclist	Adult	Yes	Dark (Streetlights on)
5th & Arlington	May 2018	Bicyclist	Unknown	Yes	Daylight
5th & Madison	April 2018	Pedestrian	Adult	Yes	Dark (Streetlights on)
5th & Central	January 2019	Pedestrian	Adult	100 feet E	Dark (Streetlights on)
5th & Central	August 2021	Bicyclist	Adult	Yes	Daylight
4th & Central	May 2021	Bicyclist	Minor	Yes	Daylight
4th & Central	October 2021	Bicyclist	Unknown	25 feet N	Daylight
2nd & Central	September 2017	Bicyclist	Unknown	60 feet E	Dark (Streetlights on)
2nd & Central	June 2021	Pedestrian	Adult	Yes	Daylight
2nd & Central	September 2021	Pedestrian	Minor	100 feet E	Daylight
Front & Madison	August 2018	Pedestrian	Adult	30 feet S	Daylight
Front & Madison	July 2019	Pedestrian	Senior	10 feet E	Daylight
Front & Central	June 2021	Pedestrian	Adult	100 feet S	Daylight
Front & Central	October 2017	Bicyclist	Adult	50 feet N	Daylight
Front & New	March 2019	Pedestrian	Adult	10 feet E	Daylight
Front & New	April 2021	Pedestrian	Adult	25 feet S	Dark (Streetlights on)
Front & New	July 2017	Pedestrian	Adult	150 feet W	Dark (Streetlights on)
Front & Washington	August 2018	Pedestrian	Adult	Yes	Daylight
Front & Liberty	June 2017	Pedestrian	Adult	Yes	Daylight
Front & Liberty	June 2017	Pedestrian	Minor	Yes	Daylight
Front & Plainfield	December 2021	Pedestrian	Adult	Yes	Dark (Streetlights on)
Front & Plainfield	December 2021	Pedestrian	Adult	Yes	Dark (Streetlights on)

Source - Safety Voyager

Recommendations

The Plainfield Bicycle Network Plan includes recommendations for ten roadways that connect residents to popular destinations such as schools, parks, and a retail district (Figure 11). The roadways in this report are organized as a "loop" as first proposed in the municipal application. The "loop" starts at Green Brook Park on the northwest side of the map. It then proceeds southeast along Grant Avenue, crosses east to Cedar Brook Park, and returns north to Green Brook Park via Plainfield High School and the Front Street commercial corridor. A "crosstown" connection is shown along 8th Street.

The recommendations on the following pages are listed following the "loop" counterclockwise, not in order of importance or difficulty of implementation. Prioritization is a question that City officials and residents must address as they decide to move forward with implementation. Although bicycle infrastructure has a strong network effect in that riders become more comfortable when their entire route has bicycle infrastructure, it is not necessary for the entire plan to be implemented simultaneously. Many of the segments can be added during the City's standard roadway maintenance cycle.

The recommendations have been developed in line with the New Jersey Complete Street Design Guide (developed by NJDOT). A short segment of the ""loop" includes State Route 28, and any proposed changes to that roadway will need to be designed and installed by the State in consultation with Plainfield.

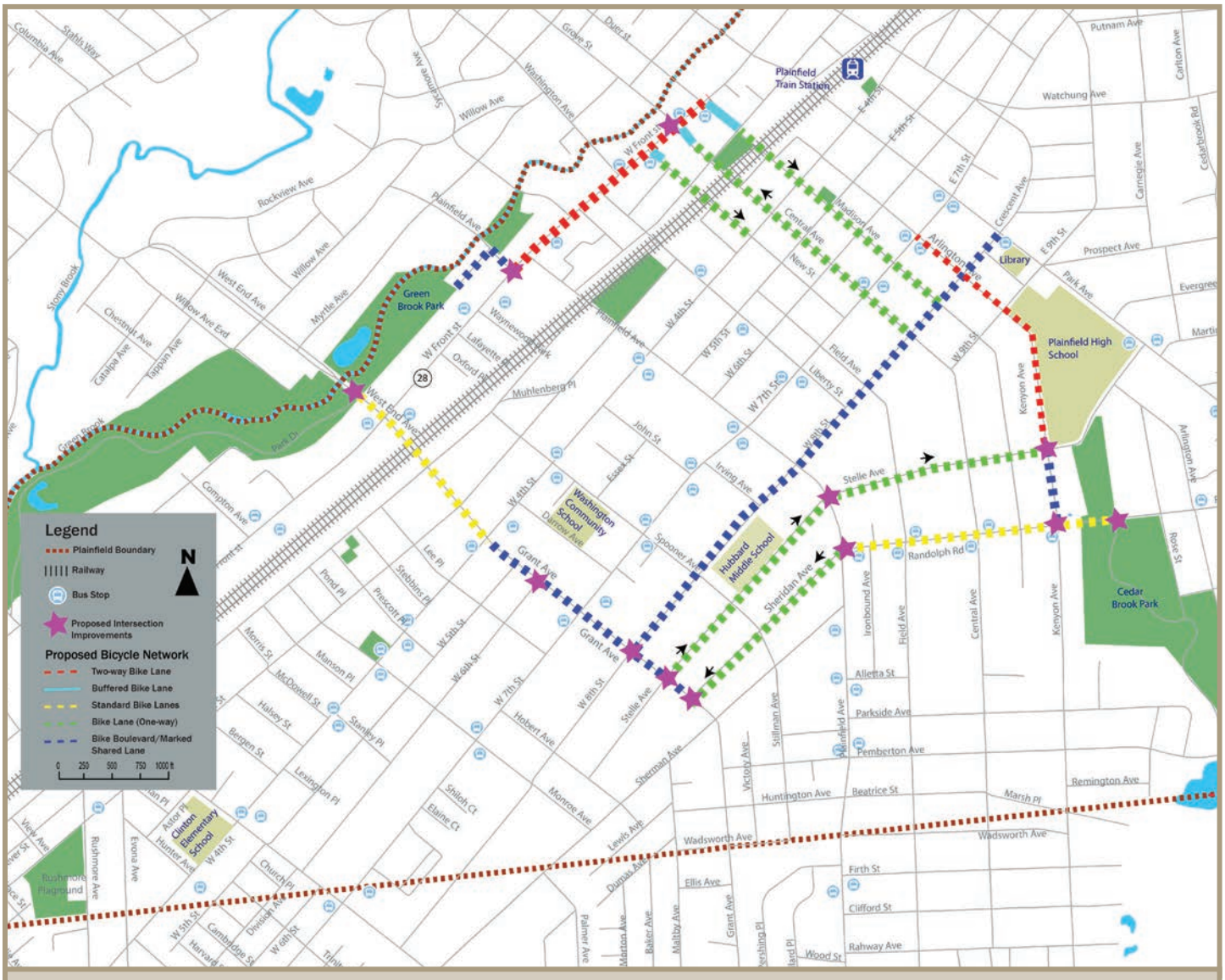


Figure 11. Map showing the recommended treatments for all segments on the Plainfield Bicycle Plan.

West End Avenue

Park Drive to West Front Street	Existing	Proposed
Speed Limit (mph)	35	**25**
Roadway Width (feet)	40	40
Directions	Two-way	Two-way
Lanes	2	2
Parking	Both sides	**One Side**
Bicycle Infrastructure	None	**Bicycle lanes**

The first segment consists of 500 feet of West End Avenue, from the town boundary with North Plainfield to West Front Street (Figure 12). This section provides connectivity to Green Brook Park, which is the start and end point of the "loop." Five-foot-wide bicycle lanes can be added by removing parking from one side of the roadway and shifting the centerline (Figure 13). Reducing the speed limit to 25 mph will increase safety and comfort for roadway users. Pedestrian access to the park can be improved by adding a curb extension, a high-visibility marked crosswalk, and Rectangular Rapid-Flashing Beacons (RRFBs) to the Park Drive intersection.

Figure 12. Looking south on West End Avenue from the town boundary. The crosswalk is proposed where the pickup truck is.

West End Avenue terminates at West Front Street where it becomes Grant Avenue on the south side of the intersection. Curb extensions are shown in Figure 13; however, as West Front Street is State Route 28 at this location, any changes must be designed and installed by NJDOT.

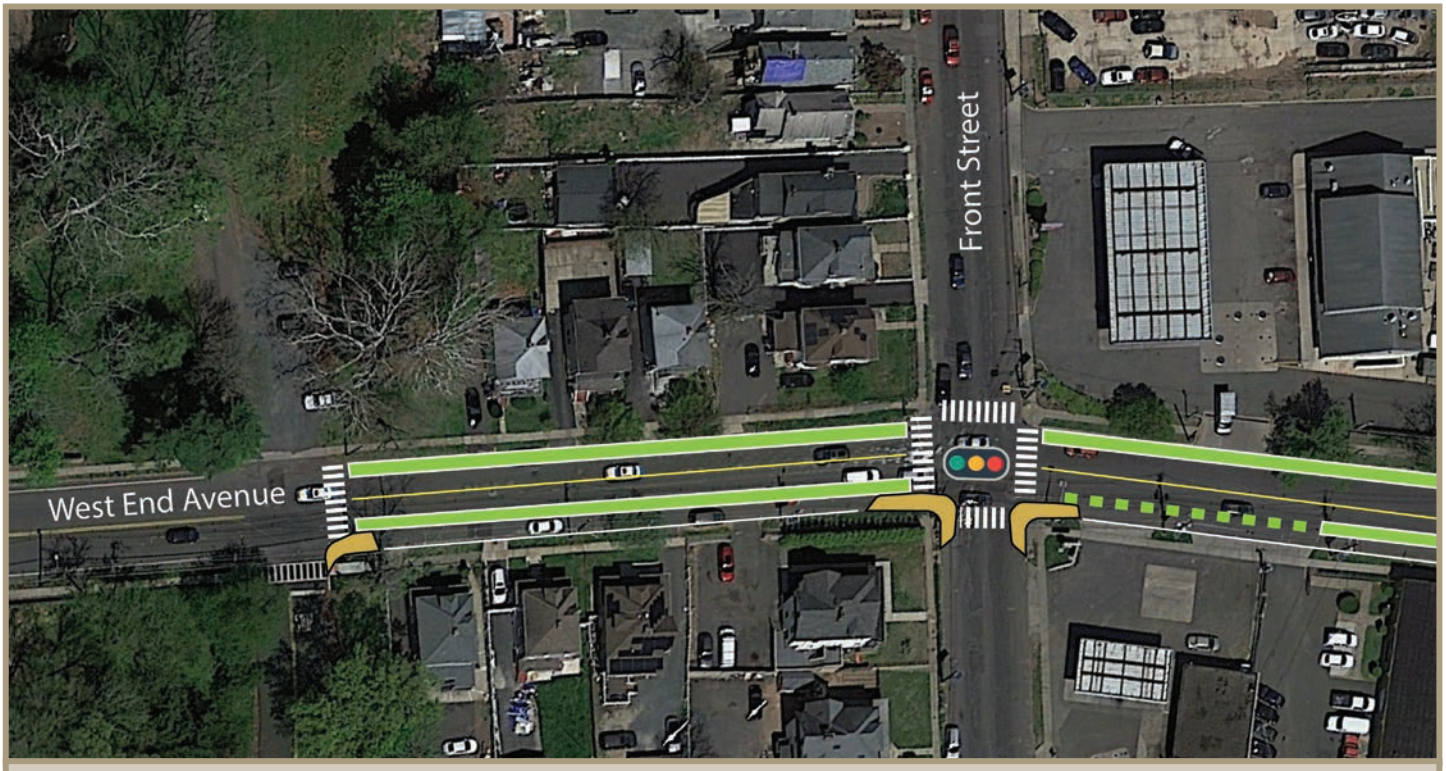


Figure 13. Plan showing proposed bicycle lanes, marked crosswalks and curb extensions added to West End Avenue.

Grant Avenue

The route continues on Grant Avenue between West Front Street and Sheridan Avenue. The width changes slightly at multiple points, decreasing from 40-feet-wide to 36-feet-wide. As such, the recommendations are divided into two sections.

West Front Street to 4th Street	**Existing**	**Proposed**
Speed Limit (mph)	25	25
Roadway Width (feet)	40	40
Directions	Two-way	Two-way
Lanes	2	2
Parking	Both sides	**One Side**
Bicycle Infrastructure	None	**Bicycle lanes**

Between West Front Street and South 2nd Street, the land use along Grant Avenue is commercial and industrial (Figure 14). The roadway then narrows briefly as it passes under a railroad embankment. South of 2nd Street, land use becomes residential, except for a church and charter school.

Figure 14. Looking south on Grant Avenue.

Figure 15 shows the proposed improvements between West Front Street and 4th Street, which involve continuing the proposed bicycle lanes on West End Avenue. To do this, parking must be eliminated from one side of the roadway, and the centerline shifted.

Figure 15. Plan showing proposed bicycle lanes, marked crosswalks and curb extensions added to Grant Avenue.

The intersection with West 4th Street is skewed, creating long crossing distances for pedestrians (Figure 16). Installing high-visibility crosswalks and curb extensions will slow turning vehicles and shorten pedestrian crossing distances. Crash data shows that multiple crashes have occurred along this part of Grant Avenue at night. Plainfield should consider adding additional lighting, especially over the intersection.

South of the West 4th Street intersection, the roadway narrows to 38 feet. Additionally, street parking is in high demand. As such, the project team recommends transitioning from bicycle lanes to a bicycle boulevard.

Figure 16. Looking south on Grant Avenue to the intersection with West 4th Street.

4th Street to Sheridan Avenue	**Existing**	**Proposed**
Speed Limit (mph)	25	**20**
Roadway Width (feet)	36-38	36-38
Directions	Two-way	Two-way
Lanes	2	2
Parking	Both sides	Both sides
Bicycle Infrastructure	None	**Bicycle boulevard**

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 model can effectively encourage bicycling and walking by reducing vehicular speeds and discouraging cut-through traffic. Bicycle boulevard features include signs, pavement markings, and other traffic-calming measures to discourage through trips by motor vehicles while accommodating local access (Figures 17 and 18).

Figure 17. Pavement markings for a bicycle boulevard in Ocean City, New Jersey.

Figure 18. Extra large bicycle boulevard stencils.

A bicycle boulevard communicates that pedestrians and bicyclists have priority along the corridor and that motorists must be especially mindful or select an alternative route. Because Grant Avenue is a residential roadway with a school and churches, it is a natural corridor for pedestrians and bicyclists making short trips. The bicycle boulevard approach would fit the character of the residential neighborhood.

Bicycle boulevards are a new 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 forms of signage that need to be deployed: regulatory and informational. Regulatory markings include speed limit signs, marked crosswalks, and instructions to drivers, bicyclists, and pedestrians where appropriate (Figures 19 and 20). This can include the "Bicycles May Use Full Lane" (R4-11) signs. Informational signage may include branding, wayfinding, and explanations of the project's purpose. It is important that community input informs the branding for these corridors.

Figure 19. Bicycle Boulevard signage in McKinley, Texas.

Figure 20. Signs for a bicycle boulevard in Portland, OR.

Pavement markings reinforce the message of the corresponding signage. Large 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, but signage is not enough. Additional tools exist to help reduce vehicle speeds so that they are closer to the speed of a bicycle. Reducing speeds helps prevent collisions, making bicyclists and pedestrians feel more comfortable when sharing the road with motor vehicle traffic.

Traffic calming measures can include vertical deflection (e.g., speed humps or tables at intersections) or horizontal deflection (e.g., chicanes and mini-roundabouts). Figure 21 shows how a mini-roundabout can be installed with low-cost materials to test the concept. Figure 22 shows what a permanent mini-roundabout can look like, which can add greenery to the neighborhood. These solutions can be combined with other measures to address community goals such as the addition of green infrastructure (Figure 23). 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 21. A mini-roundabout being tested in Denver, CO.

Figure 22. Permanent mini-roundabout in Seattle, WA.

Figure 23. Traffic calming and green infrastructure in Shoreline, WA.

Figure 24 shows how bicycle boulevard treatments such as raised crosswalks at 6th Street and Queen City Charter School, a mini-roundabout at 8th Street, curb extensions, and new pavement striping can be added to Grant Avenue.

Figure 24. Proposed improvements to Grant Avenue.

Traffic diverters can enhance a bicycle boulevard by decreasing traffic volumes. As shown in Figure 25, they can be designed to force motor vehicles to turn off the roadway while bicycles and pedestrians can continue straight. This allows residents full access to their homes while making the corridor unattractive to cut-through traffic. Diverters are not shown in Figure 24 because they would require a traffic engineering study to determine their feasibility.

Figure 25. A diagram of a traffic diverter with pass-through for bicycles and pedestrians. Source: NACTO.

Stelle Avenue, Sheridan Avenue, and Randolph Road

As the route reaches the southern end of Grant Avenue, it turns east (left) toward Cedar Brook Park and Plainfield High School via both Stelle Avenue and Sheridan Avenue. The route utilizes Stelle Avenue from Grant Avenue to Kenyon Avenue and Sheridan Avenue (which becomes Randolph Road east of Plainfield Avenue) from Grant Avenue to Cedar Brook Park. Although Sheridan Avenue and Randolph Road are both 30-feet-wide, Randolph Road is used by public transit buses and appears to see a higher volume of traffic. In addition, east of the study area, Randolph Road leads to a small medical center. As such, the recommendations for that section of roadway are different.

	Stelle Avenue		Sheridan Avenue		Randolph Road	
	Grant Ave. to Kenyon Ave.		Grant Ave. to Plainfield Ave.		Plainfield to F. S. Mathewson	
	Existing	**Proposed**	**Existing**	**Proposed**	**Existing**	**Proposed**
Speed Limit (mph)	25	25	25	25	25	25
Roadway Width (feet)	36	36	30-32	30-32	30	30
Directions	Two-way	**One-way**	Two-way	**One-way**	Two-way	Two-way
Lanes	2	1	2	1	2	2
Parking	Both sides	Both sides	Varies	Varies	Both sides	**None**
Bicycle Infrastructure	None	**Bicycle Lane**	None	**Bicycle Lane**	None	**Bicycle Lanes**

Stelle Avenue and Sheridan Avenue currently allow two-way traffic but are too narrow to accommodate bicycle lanes while retaining the existing on-street parking (Figures 26 and 27). Bicycle lanes can be added by changing the traffic flow on Stelle Avenue and Sheridan Avenue to be one-way in opposite directions, eliminating one vehicle lane on each roadway while maintaining parking, however, this proposed approach would require a traffic engineering study to determine its feasibility and public outreach would be required to solicit feedback and gauge community acceptance. This plan proposes converting Stelle Avenue to one-way eastbound and Sheridan Avenue to one-way westbound (Figure 28).

In addition to adding bicycle lanes, many of the traffic calming examples discussed for Grant Avenue can be incorporated into the design. These include curb extensions and high-visibility crosswalks for pedestrians, and speed bumps or chicanes to lower vehicle speeds (Figure 29).

Figure 26. Looking east on Stelle Avenue.

Figure 27. Looking east on Sheridan Ave.

Figure 28. Proposed Stelle/Sheridan and Grant plan.

Figure 29. Proposed traffic calming and bike lane on Stelle Avenue.

Randolph Road is 30-feet-wide with two travel lanes and parking allowed on both sides of the street (Figure 30). However, the roadway does not appear wide enough to safely accommodate bus traffic with cars parked on both sides of the roadway. While a parking study was not conducted, the project team found that demand for parking is low. This may be because all homes have a driveway, and residents avoid parking their cars on a narrow street. The project team proposes eliminating the on-street parking and adding a five-foot-wide bicycle lane in each direction.

The route ends at Cedar Brook Park. A crosswalk with an RRFB should be considered at F. S. Mathewson Drive to provide safe access into the park for both bicyclists and pedestrians.

Figure 30. Looking east on Randolph Road.

8th Street

The study team was asked to identify an additional cross-town route to provide more connectivity in the neighborhood and connect the route to Hubbard Middle School and the Plainfield Public Library (Figure 31). The team proposed 7th Street, but community members expressed concern about high traffic volume. Instead, they recommended 8th Street, which is a quieter residential roadway.

Grant Avenue to Park Avenue	**Existing**	**Proposed**
Speed Limit (mph)	25	**20**
Roadway Width (feet)	30-36	30-36
Directions	Two-way	Two-way
Lanes	2	2
Parking	Varies	**Varies**
Bicycle Infrastructure	None	**Bicycle Boulevard**

8th Street varies in width, occupying thirty-six feet between Grant Avenue and Plainfield Avenue, decreasing to thirty-feet between Plainfield Avenue and Arlington Avenue, and finishing at 34-feet-between Arlington Avenue and Park Avenue. Street parking is allowed on both sides in the first section and only on the north side in the other sections.

Although traffic counts are not available, residents stated that the roadway sees low traffic volumes as most drivers use 7th Street. The exception is some additional traffic during school drop-off and pick-up at Hubbard Middle School.

This report recommends giving 8th Street a bicycle boulevard treatment similar to Grant Avenue. This means a lower speed limit, traffic calming, and prominent striping and signage reminding motorists that 8th Street is a shared roadway.

Figure 31. Looking east on 8th Street, with Hubbard Middle School visible on the right.

Additionally, Plainfield should continue to work with EZ Ride TMA to provide bicycle safety education to middle school students. Providing a safe and comfortable way to bicycle to school can also help relieve some of the traffic created by parents driving their children. The town and school district should also ensure that safe parking for bicycles is easily available to students and staff.

Plainfield may also consider converting some or all of 8th Street to one-way traffic in coordination with Stelle Avenue, which would allow for the addition of a dedicated bicycle lane.

Kenyon Avenue and Arlington Avenue

The "loop" continues onto Kenyon Avenue between Randolph Road and West 9th Street, intersecting with Stelle Avenue. North of West 9th Street, the roadway becomes Arlington Avenue, where the route connects with 8th Street after one block.

	Kenyon Avenue		Kenyon Avenue		Arlington Avenue	
	Randolph Rd. to Stelle Ave.		Stelle Ave. to W. 9th St.		W. 9th St. to W, 8th St.	
	Existing	**Proposed**	**Existing**	**Proposed**	**Existing**	**Proposed**
Speed Limit (mph)	25	**20**	25	25	25	25
Roadway Width (feet)	30	30	34	34	38	38
Directions	Two-way	Two-way	Two-way	**One-way**	Two-way	**One-way**
Lanes	2	2	2	**1**	2	**1**
Parking	Both sides	Both sides	Both sides	**One side**	Both sides	**One side**
Bicycle Infrastructure	None	**Bicycle Boulevard**	**None**	**Two-way Bike Path**	None	**Two-way Bike Path**

Kenyon Avenue is 30-feet-wide and lined by residential properties on both sides of the roadway between Randolph Road and Stelle Avenue. There is a speed bump located mid-block to deter speeding. Due to the narrow width and the use of street parking by residents, a bicycle boulevard treatment is proposed for the block.

North of Stelle Avenue, the roadway widens slightly to 34 feet and the High School occupies the entire eastern frontage until West 9th Street (Figure 32). The western side of the roadway has residential properties. Parking is allowed only on the western side.

Figure 32. Looking north of Kenyon Avenue, the High School property can be seen on the right.

Figure 33. Proposed two-way bicycle path on Kenyon Avenue connecting to Stelle the Avenue bicycle lane.

The project team recommends that Plainfield conduct a traffic study to determine the feasibility of converting Kenyon Avenue to one-way traffic, allowing for the addition of a two-way protected bicycle path alongside the High School frontage. Figure 33 shows one lane running southbound, however a traffic study has not been conducted to determine if the reverse is preferable. The preferred width of the bicycle path is 12 feet, but 10 feet is permitted. The minimum width permitted for the buffer is 1.5 feet, but 3 feet is preferred.

The new path can be a quick, short-term installation using paint, plastic soft-hit bollards, signage, and temporary landscaping (Figure 34).

Figure 34. Two-way bicycle lane in New Brunswick, NJ.

If the two-way bicycle path is deemed a success, Plainfield can explore elevating the trail to sidewalk level, allowing for the allocation of 15 feet for pedestrians and bicyclists. The width of typical shared-use paths range from 10 to 14 feet. Additional permanent improvements could include pedestrian-scale lighting, trees, green infrastructure, and amenities such as benches and water fountains (Figure 35). Aside from providing comfort to pedestrians, the added trees and amenities may decrease how long the walk is perceived along the soccer field.

Figure 35. Sidewalk and bicycle trail with landscaping and amenities in Clovis, California.

For both proposed designs, it is critical to consider how the trail interacts with driveway entrances. Consistent signage and high visibility paint treatments should notify drivers of the trail's presence.

An additional consideration is how drop-off traffic interacts with the new bicycle path. While the intention of the bicycle plan is to increase the number of people bicycling to school and other destinations within Plainfield, some parents will continue to drive their children. It is important to coordinate with the school to ensure that drop-off and pick-up locations do not conflict with the bicycle corridor.

Northeast of West 9th Street, the roadway is called Arlington Avenue. The north side of the roadway is fronted by a park (Figure 36). Adjacent to the park is the Plainfield Public Library. This plan proposes continuing the treatment from the previous segment onto West 9th Street, with a two-way protected bicycle path and one-way vehicle traffic.

Figure 36. Looking northeast on Arlington Avenue, with the park on the right.

During the public meeting, attendees stated that the park would benefit from additional seating and other amenities. New additions could be coordinated with the library, including tables to play chess or other games, a water fountain, secure bicycle parking, a bicycle maintenance station, or outdoor fitness equipment.

Madison Avenue, Central Avenue, and New Street

At West 8th Street, the "loop" turns south. To continue to West Front Street, connections are provided along Madison Avenue, Central Avenue, and portions of New Street.

	Madison Avenue		Central Avenue		New Street	
	8th Street to W. Front St.		8th Street to W. Front St.		2nd Street to W. Front St.	
	Existing	**Proposed**	**Existing**	**Proposed**	**Existing**	**Proposed**
Speed Limit (mph)	25	25	25	25	25	25
Roadway Width (feet)	30	30	30-36	30-36	40	40
Directions	One-way	One-way	Two-way	**Varies**	Two-way	Two-way
Lanes	1-2	1-2	2	**1**	2	2
Parking	Both sides	**Varies**	Both sides	Both Sides	Both sides	Both sides
Bicycle Infrastructure	None	**Bicycle lane with buffered segment**	None	**Bicycle lane with buffered segment**	None	**Bicycle lane with buffered segment**

Madison Avenue transitions from residential to commercial land use as it approaches West Front Street. It is uniformly 30-feet-wide and is one-way eastbound. Parking is allowed on both sides of the street. At intersections, parking is replaced by a second lane.

The plan proposes adding a bicycle lane running in the same eastbound direction as traffic. Between West Front Street and 2nd Street, a buffered bicycle lane can be added by removing parking on one side of the roadway (Figure 37). Between 2nd Street and 8th Street, a standard bicycle lane can be added next to the parking.

To complement the eastbound bicycle lane, a westbound couplet is proposed along Central Avenue. Starting from West 8th Street, Central Avenue is 30-feet-wide with two-way traffic and parking allowed on both sides. West of 7th Street, the roadway widens to 32 feet and then widens again to 36 feet after West 5th Street.

The plan proposes that Plainfield investigate the feasibility of converting Central Avenue to one-way westbound between West 8th Street and West 5th Street with a standard bicycle lane. After West 5th Street, the roadway is wide enough to support two-way traffic while still accommodating one bicycle lane. Approaching West Front Street, the roadway widens again slightly, allowing for a buffer to be added to the bicycle lane.

At the intersection with West Front Street, the roadway widens to over 100 feet, with two medians and an eastbound slip-lane (Figure 38). The study team recommends closing the slip-lane and converting it to a pedestrian plaza. In the short term, this can be done as a demonstration project, using low-cost materials (Figure 39). As funding allows, the City can upgrade the project to a permanent installation, which can include the addition of green infrastructure.

New Street only runs between West Front Street and West 7th Street. The roadway is wide enough to support a bicycle lane between West Front Street and West 2nd Street without making changes to parking or traffic flow. Adding a bicycle lane in this section gives cyclists another option to navigate the area.

Figure 37. Proposed bicycle lanes shown on Madison Ave., Central Ave., and New St., with Front Street.

Figure 38. Looking to Central Avenue from Front Street, with the slip-lane visible on the right.

Figure 39. An example of a painted curb extension in Seattle, WA.

For all three roadways, pedestrian improvements such as high-visibility crosswalks and curb extensions should be considered.

West Front Street

The proposed bicycle lanes on Madison Ave, Central Avenue, and New Street lead to a commercial section of West Front Street. There are restaurants, grocery stores, a bank, a dollar store, and various small businesses. As such, the area is a popular destination for bicyclists and pedestrians running errands or working locally. However, parking is in high demand and the roadway also hosts a NJ TRANSIT bus route. To accommodate the various roadway users, the project team proposes a two-way protected bicycle path on the southern side of the roadway, replacing the existing northbound parking.

Figure 40. Looking south on Front Street to Central Avenue.

Madison Avenue to Geraud Avenue	**Existing**	**Proposed**
Speed Limit (mph)	25	**20**
Roadway Width (feet)	36-44	36-44
Directions	Two-way	Two-way
Lanes	2	2
Parking	Both sides	**One side**
Bicycle Infrastructure	None	**Two-way Bike Path**

Figure 41. Proposed two-way bicycle path shown along West Front Street.

A two-way protected bicycle path would provide bicyclists the most comfort and safety by completely separating them from other vehicles. Driveways and intersections present the greatest challenge to safety; fortunately, the driveways along the corridor are for low-volume residential properties. Eliminating the parking on one side of the roadway will require extensive outreach by Plainfield to the businesses to highlight the safety benefits of the project and to explain how the infrastructure can attract new local customers.

As with the Kenyon Avenue proposal, Plainfield can test a two-way protected path with low-cost materials. The City is also encouraged to apply for a Transportation Alternatives Set-Aside grant to fund a streetscape restoration of the corridor. The project's centerpiece could include raising the bicycle path to sidewalk level to maximize safety and comfort. However, a full redesign should incorporate numerous features that will enhance the safety and comfort of all roadway users and help support local businesses.

In 2016, Plainfield developed a Streetscape Design Manual. The manual covers design details for all public right-of-way improvements to pursue coordinated, consistent, and comprehensive development in the commercial district. Many of the common streetscape elements discussed in that manual can be funded through federal grants to help create a sense of place. For instance, consistently placed and properly maintained trees can create a pleasant rhythm along the street, which can help both define and reinforce the street character while providing shade for pedestrians (Figure 42).

Figure 42. Trees with a railing in Somerville, NJ.

Roadway elements such as crosswalk ramps and curb extensions can provide several new opportunities to add to the corridor's appearance. For instance, curb extensions can be combined with green infrastructure, more seating, and bicycle parking. An example of both high- visibility midblock crossings and curb extensions with green infrastructure and seating can be seen in Union Township (Figure 43). A standard design for curb extensions would also contribute to the corridor's uniform look.

Figure 43. A well-lit midblock crossing with seating and green infrastructure, Union, NJ. (Arterial LLC)

Creating a unified look and sense of place along West Front Street would make the corridor more appealing to residents, commuters, and visitors, which would help support local businesses, even with a loss of parking spaces.

The final block on West Front Street, between Plainfield Avenue and Garaud Avenue, is part of State Route 28. Design and implementation for that section must be done in coordination with NJDOT.

Geraud Avenue and Brookside Place

The destination of the "loop" is Green Brook Park. To access the park, changes are proposed to Geraud Avenue and Brookside Place. Geraud Avenue runs 350 feet from West Front Street to Green Brook and terminates at a closed bridge. Brookside Place runs 450 feet from Geraud Avenue to Green Brook Park. It is fronted by 20 homes. Although this section is a dead-end, residents noted that it does see higher than expected traffic as people park on these roads to access the Drake House Museum and the park.

	Geraud Avenue		**Brookside Place**	
	West Front Street to Brookside Place		Geraud Avenue to Green Brook Park	
	Existing	**Proposed**	**Existing**	**Proposed**
Speed Limit (mph)	25	**20**	25	**20**
Roadway Width (feet)	34	34	29	29
Directions	Two-way	Two-way	Two-way	Two-way
Lanes	2	2	2	2
Parking	Both sides	Both sides	Both sides	Both sides
Bicycle Infrastructure	None	**Shared lanes**	None	**Bicycle lanes**

An enhanced crossing is proposed on West Front Street to provide access to Geraud Avenue for bicyclists and pedestrians. Features of the crossing would include high-visibility crosswalks, a median island, and curb extensions (Figure 44). As the signalized intersection with Plainfield Avenue is less than 200 feet away, a traffic study may be needed to determine if a second coordinated signal is required.

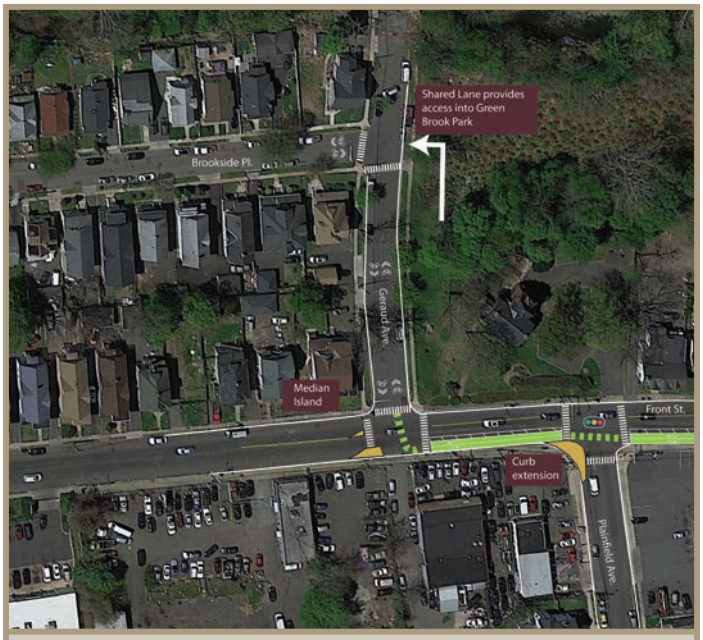


Figure 44. Map showing proposed West Front Street bicycle path connecting to Geraud Avenue and Brookside Place.

Due to the narrow roadway widths, limited traffic volumes, and residential land use in this section, this plan proposes adding shared-lane markings and signage to inform roadway users that the roadway is to be shared between bicyclists and motor vehicles. In addition, lowering the speed limit to 20 mph—similar to the bicycle boulevards—should be considered.

If the bridge is reopened, different bicycle infrastructure should be considered to provide connectivity between Plainfield and North Plainfield.

Additional Recommendations

While this plan proposes curb extensions and high-visibility crosswalks throughout the "loop," additional ways to improve safety and accessibility in the study area for bicyclists and pedestrians include:

1. Provide and Maintain High Quality Pedestrian Infrastructure

Although a detailed sidewalk audit was not conducted as part of this project, the project team did observe deteriorated sidewalk conditions in various areas. In many cases, the uneven sidewalk makes entire blocks inaccessible to pedestrians with disabilities. While sidewalks are the responsibility of homeowners in New Jersey, individual replacement can be very costly. The City should consider a coordinated project to rebuild sidewalks throughout the entire "loop" using a dedicated assessment or grants.

In residential areas, Plainfield has a lush tree canopy. The trees provide much-needed shade for pedestrians, can help slow drivers, and enhances the aesthetic appeal of the City. Efforts should be taken to ensure that sidewalk restoration preserves as many existing mature trees as possible. As noted throughout this report, green infrastructure can be combined with traffic safety in areas where the urban canopy is lacking.

2. 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 the spacing of streetlights is long in places, and many intersections lack well-positioned overhead lights. Plainfield should ensure that the roadways and intersections are well lit. In addition, pedestrian-scale lighting along the sidewalks can help with personal safety concerns. Lighting is now an FHWA Proven Safety Countermeasure, and in 2022 they released a Lighting Primer (https://safety.fhwa.dot.gov/roadway_dept/night_visib/docs/Pedestrian_Lighting_Primer_Final.pdf). As most of the study area is in a residential area, Plainfield should select lighting designs that minimize glare and ensure that lighting is focused on the roadway and not on residential properties.

3. Traffic Signals, Signage, and Striping

Traffic signals along the study corridor should be upgraded to include auditory pedestrian cues with pedestrian countdowns at all four crossings as the opportunity arises during roadway maintenance and improvement projects. Pedestrian phases should provide pedestrians sufficient time to cross the intersection regardless of their abilities.

4. Provide Supporting Bicycle Facilities

In addition to roadway infrastructure, some of the common barriers that bicyclists face are access to safe and secure parking and bicycle repair/maintenance equipment. Incorporating these facilities near trip destinations (such as the train station, schools, libraries, offices, and businesses) along the corridor is important to address bicyclist needs and encourage bicycling as a travel mode.

Providing safe and secure bicycle parking is critical to prevent theft and protect bicycles from vandalism and inclement weather. Adequate bicycle parking at appropriate locations can encourage people to ride to work, school, or recreational destinations without parking concerns in mind. The *New Jersey Complete Streets Design Guide* and the *New Jersey School Zone Design Guide* recommend several bicycle parking rack designs from the Association of Pedestrian and Bicycle Professionals that allow bicycles to be attached to the rack at two points. Bicycle racks can also be installed in the roadway instead of the sidewalk as bicycle corrals. Doing so can be particularly useful where there is limited sidewalk space (Figure 45).

Figure 45. Bicycle corral at an intersection in New York City, NY. (Photo Credits: NACTO)

Conclusion

Plainfield is a compact city where getting to schools, parks, residences, and downtown businesses by bicycle can be safe and convenient. Installing dedicated bicycle infrastructure is an important next step. However, one challenge is the narrow width of many roadways. This report identifies several recommendations that could improve bicycle access to destinations and discourage unsafe driving behaviors using a range of designs consistent with the New Jersey Complete Streets Design Guide.

Many of these improvements can begin as demonstration projects or as part of regular municipal road maintenance. By making the changes quickly and with low-cost materials, the City can receive meaningful feedback from residents based on their real-world experience. If the improvements are ineffective or have unintended consequences, they can be easily removed. The safety of all roadway users is important, and this report also provides recommendations for pedestrians, including high-visibility crosswalks, curb extensions, and lighting.

While this report focuses on infrastructure, successful implementation will also require education and community support. The study team encourages Plainfield to continue working with EZ Ride and the New Jersey Safe Routes to School Resource Center to develop programs that can help make bicycle riding an easy choice for residents.

The recommendations in this plan were limited to Wards 3 and 4. Plainfield should identify roadways in Wards 1 and 2 that can receive similar treatments to provide connectivity throughout the entire City. Plainfield has a robust transportation network, and improving it to be more bicyclist- and pedestrian-friendly will better connect residents, parks, businesses, and schools in a safe, sustainable, and healthy way.

Appendix

A. Workshop Flyers

B. Potential Funding Resources

C. Design Resources

A. Workshop Flyers

PUBLIC MEETING

Thursday, March 9, 2023
7:00 pm
Plainfield Senior Center
400 E. Front St, Plainfield, NJ 07060

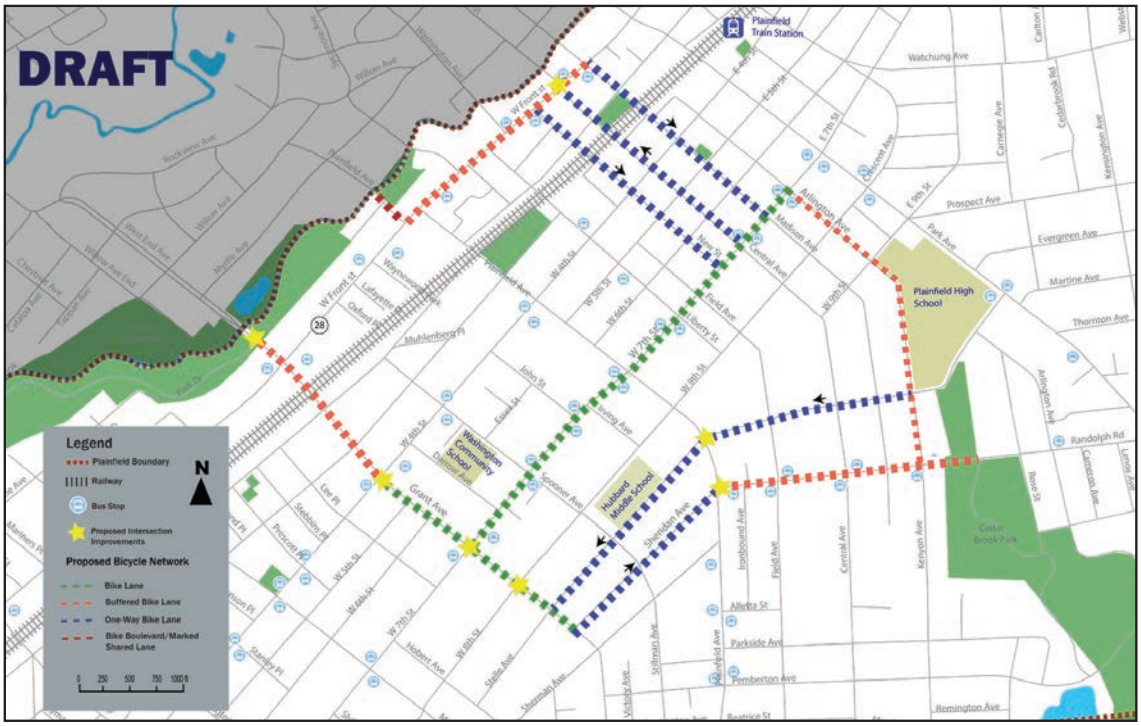
Learn about proposed bicycle routes in Plainfield!

The City of Plainfield wants to make it easier and safer to bicycle around town!

Join us on Thursday, March 9, to learn about a preliminary route for bicycle and pedestrian safety improvements in the 3rd and 4th wards. We want your input!

This effort is part of the Complete Streets Technical Assistance Program, a collaboration between Sustainable Jersey, the Voorhees Transportation Center at Rutgers University, and the North Jersey Transportation Planning Authority (NJTPA). Funded by the NJTPA, the program helps towns and cities imagine a safer, more functional, and more welcoming environment for everyone who uses the street.

Registration is encouraged but not required: https://go.rutgers.edu/Plainfield



NJTPA NORTH JERSEY TRANSPORTATION PLANNING AUTHORITY

SUSTAINABLE JERSEY REGISTERED

RUTGERS

REUNIÓN PÚBLICA

Jueves, marzo 9, 2023
7:00 pm
Plainfield Senior Center
400 E. Front St, Plainfield, NJ 07060

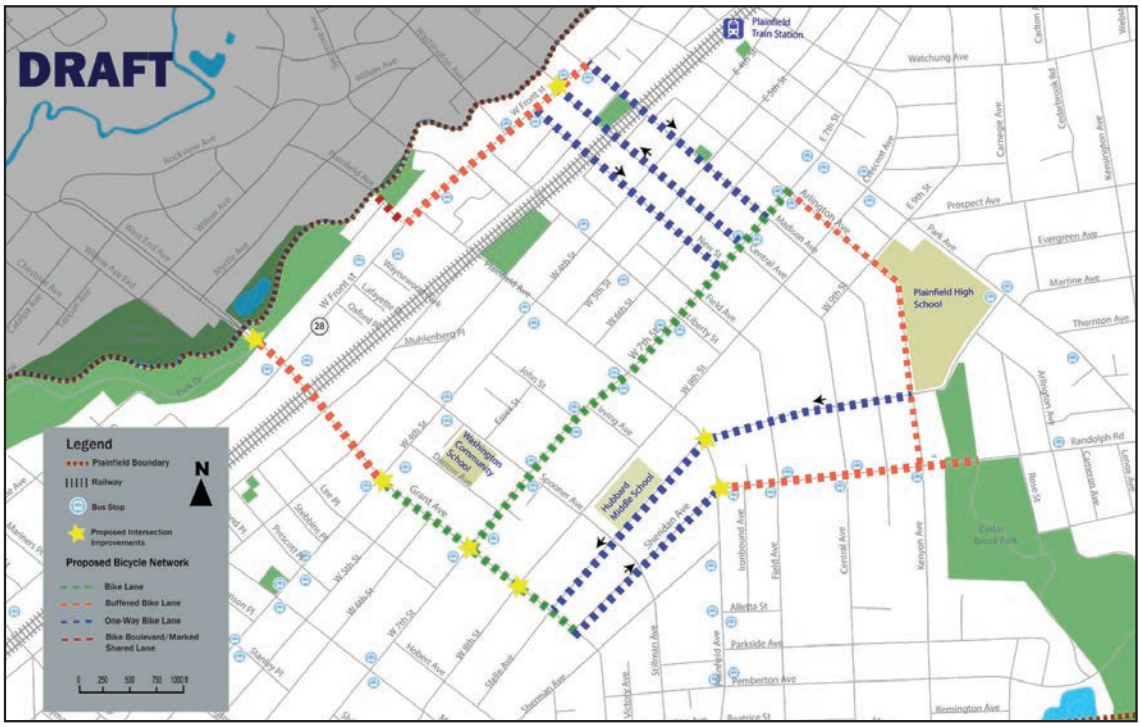
Conozca los carriles para bicicletas propuestos para Plainfield.

¡La ciudad de Plainfield quiere que sea más fácil y seguro andar en bicicleta por la ciudad!

Únase a nosotros el jueves 9 de marzo para conocer una ruta preliminar para mejoras en la seguridad de ciclistas y peatones en los distritos 3 y 4. ¡Queremos tu opinión!

Este esfuerzo es parte del Programa de Asistencia Técnica de Calles Completas, una colaboración entre Sustainable Jersey, el Centro de Transporte Voorhees en la Universidad de Rutgers y la Autoridad de Planificación del Transporte del Norte de Jersey (NJTPA). Financiado por la NJTPA, el programa ayuda a los pueblos y ciudades a imaginar calles más seguras y hospitalario para todos.

Se recomienda el registro, pero no es obligatorio: https://go.rutgers.edu/Plainfield



NJTPA NORTH JERSEY TRANSPORTATION PLANNING AUTHORITY

SUSTAINABLE JERSEY REGISTERED

RUTGERS

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.

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

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

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

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://njdotlocalaidrc.com/state-funded-programs/safe-streets-to-transit

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, Bicycle, and Pedestrian 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://njdotlocalaidrc.com/federally-funded-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/

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 2023 fiscal year are due on July 10, 2023. More information is available here: https://www.transportation.gov/grants/SS4A

Reconnecting Communities Pilot Program (RCP): The Reconnecting Communities Pilot Program was established by the Infrastructure Investment and Jobs Act of 2021 (IIJA). The program aims to correct wrongs of past transportation projects that have isolated or otherwise cut off communities from jobs and other amenities. Ideal projects improve access in one or more ways, increasing opportunities for residents of impacted communities. Congress has appropriated $1 billion for this program through fiscal year 2026. States, counties, and local units of government are eligible to apply for funding to plan and implement projects on facilities of which the applicant is the owner. Non-owners may apply for planning grants, as well as capital construction grants, provided that the facility owner has appropriately endorsed the application. All grants require a 20 percent local match. More information is available here: https://www.transportation.gov/grants/reconnecting-communities

Thriving Communities Program (TCP): The Thriving Communities Program provides technical assistance to governments and transit agencies. The program focuses on communities that have suffered historic disinvestment and lack the resources and capacity to successfully engage, develop, design, and deliver infrastructure projects. The program provides planning, technical assistance, and capacity building to better navigate federal requirements, identify financing and funding opportunities, and grow long-term capacity to leverage transportation investments to achieve broader economic and community development goals. More information is available here: https://www.transportation.gov/grants/thriving-communities

Neighborhood Access and Equity Grant Program: This program was created by the Inflation Reduction Act of 2022 (IRA). Much of the eligibility and criteria are similar to the Reconnecting Communities Pilot (RCP, see above). It appropriates an additional $1.8 billion to reconnecting communities.

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:

Together North Jersey Funding and Resources Database: https://togethernorthjersey.com/funding-tools-database/

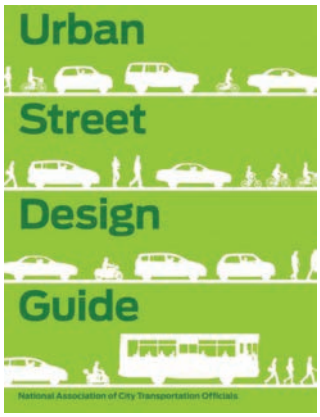
New Jersey Transportation Infrastructure Bank (NJTIB): The NJTIB is an independent State Financing Authority responsible for providing and administering low interest rate loans to qualified municipalities, counties, and regional authorities in New Jersey. The unique partnership with NJDOT was established 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.

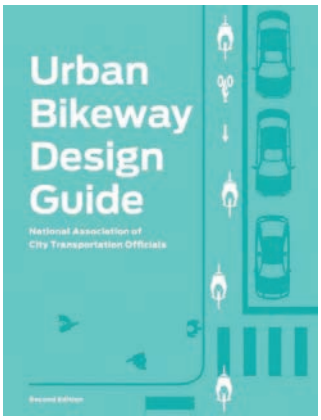
County and Municipal Open Space Trust Funds: All New Jersey counties and many New Jersey municipalities have an Open Space Trust Fund, which is a dedicated program supporting open space land acquisition. The trust funds are established by ballot measure. Depending on the fund parameters, other development 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. Design Resources

NACTO Guides



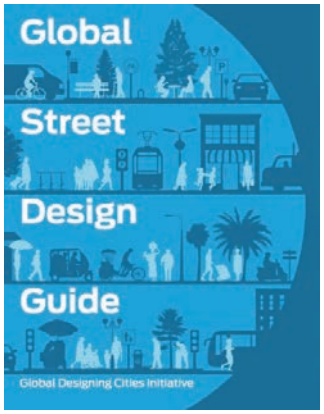
Urban Street Design Guide



Urban Bikeway Design Guide

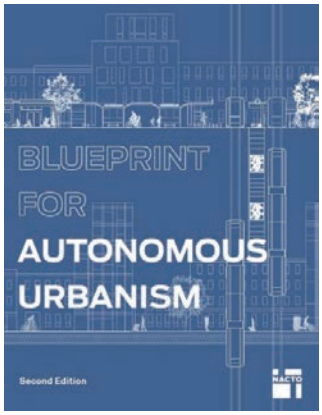
Transit Street Design Guide

Urban Street Stormwater Guide



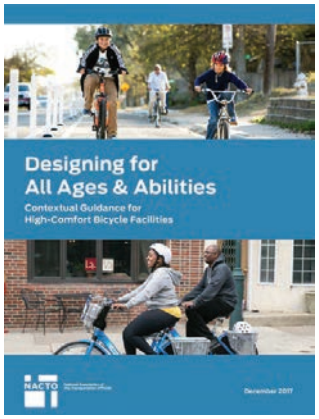
Global Street Design Guide

Designing Streets for Kids



Blueprint for Autonomous Urbanism

Bike Share Station Siting Guide

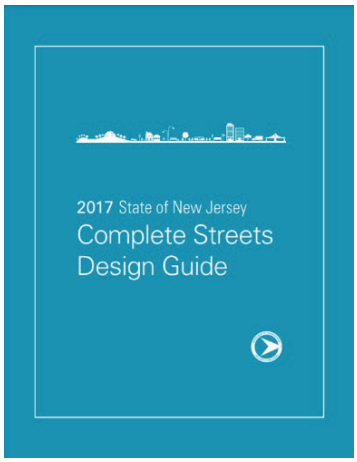


Designing for All Ages & Abilities

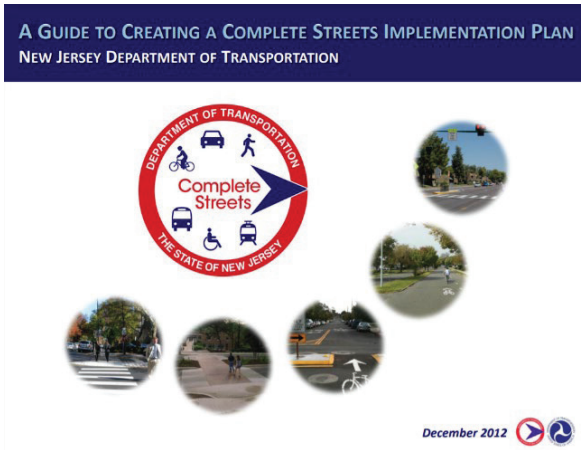
Don't Give Up at the Intersection

NJDOT Guides

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

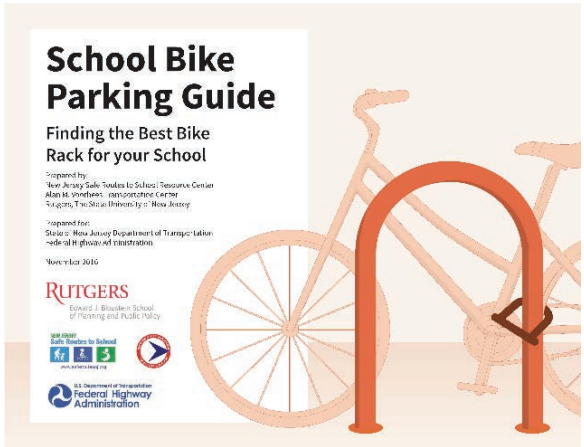


[2017 State of New Jersey Complete Streets Design Guide]

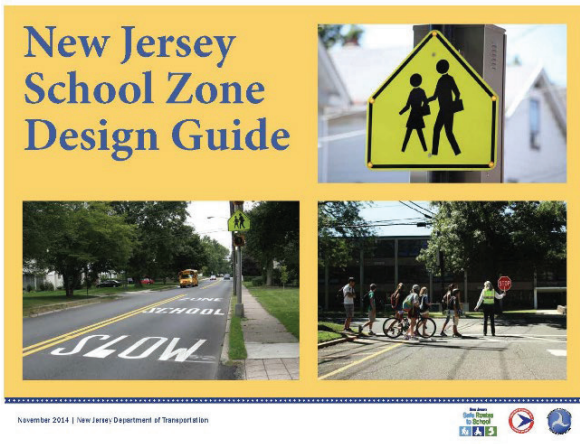


[A Guide to Creating a Complete Streets Implementation Plan]

[A Guide to Policy Development]

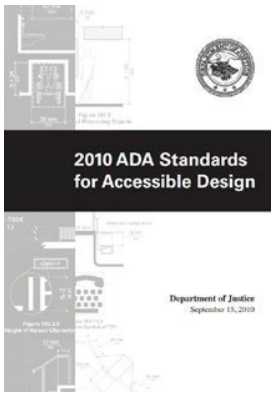


[School Bicycle Parking Guide]



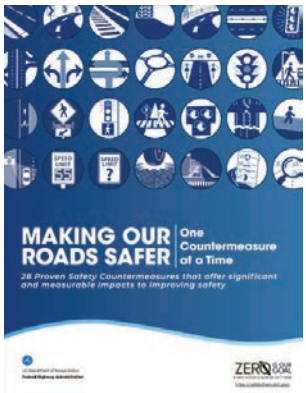
[New Jersey School Zone Design Guide]

ADA Guidelines



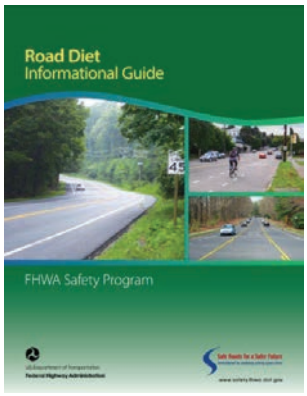
[ADA Standards for Accessible Design]

FHWA Guides

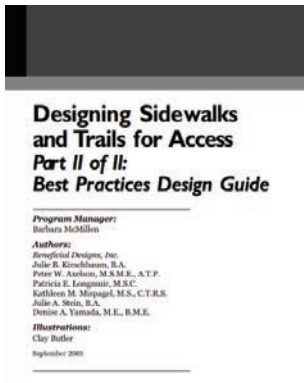


[Making Our Roads Safer: One Counter-measure at a Time]

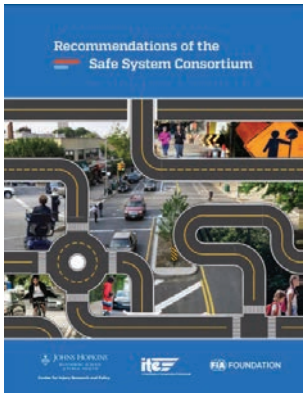
[Separated Bike Lane Planning and Design Guide]



[Road Diet Informational Guide]

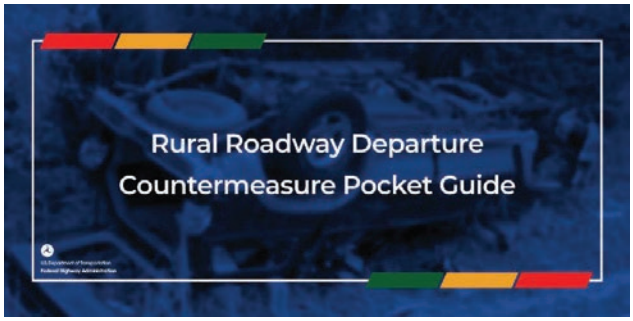


[Designing Sidewalks and Trails for Access Part II of II: Best Practices Design Guide]



[Recommendations of the Safe System Consortium]

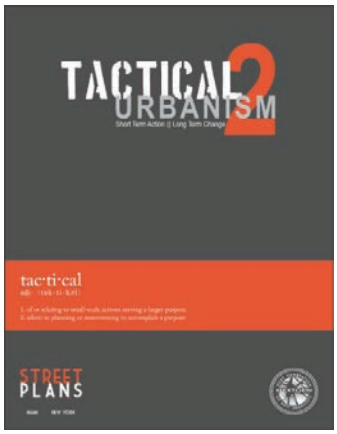
[A Safe System-Based Framework and Analytical Methodology for Assessing Intersections]



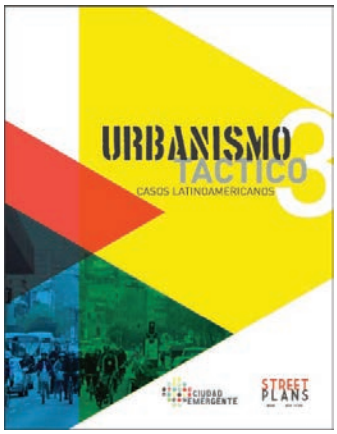
[Rural Roadway Departure Countermeasure Pocket Guide]

Tactical Urbanism Guides

[Tactical Urbanism 1]



[Tactical Urbanism 2]



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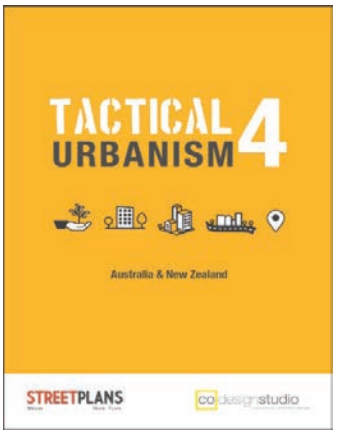

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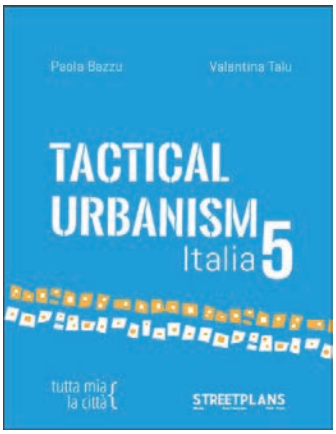

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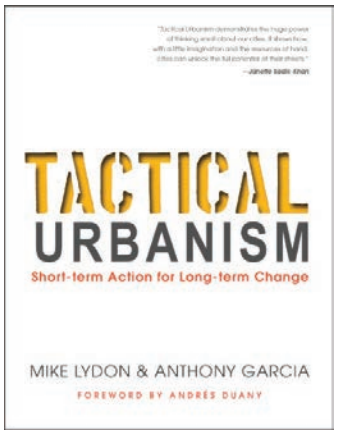
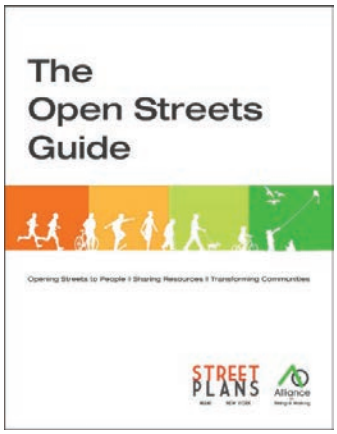
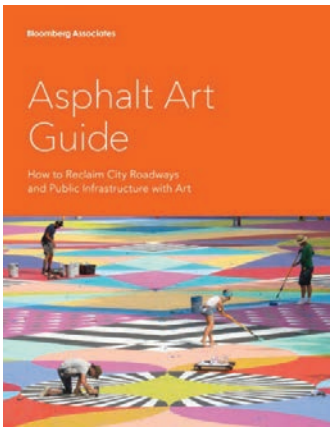


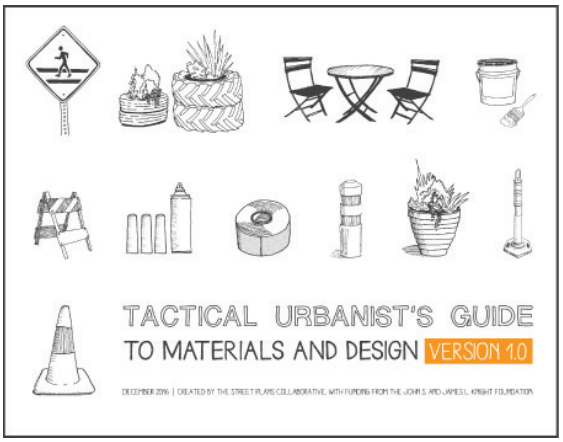
[Tactical Urbanism: The Book]



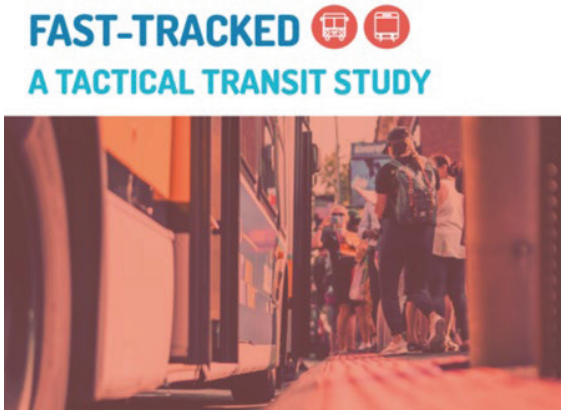
[The Open Streets Guide]



[Asphalt Art Guide]



[Tactical Urbanist's Guide to Materials and Design]



[Fast-Tracked: A Tactical Transit Study]