



Greenway Plan

Borough of Eatontown, Monmouth County, NJ

2019



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 United States Government assumes no liability for its contents or its use thereof.

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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

This report identifies a number of potential infrastructure improvements to realize a safe and attractive multi-use trail connecting Wolcott Park, Wampum Lake Memorial Park, and the F. Bliss Price Arboretum and Wildlife Sanctuary in the Borough of Eatontown, New Jersey. The recommendations in this report were developed through the North Jersey Transportation Planning Authority (NJTPA)'s Complete Streets Technical Assistance (CSTA) Program. Eatontown was one of nine communities selected to receive up to \$10,000 in technical assistance through the program. The Borough of Eatontown requested assistance developing a bicycle and pedestrian greenway connecting the three parks.

The recommendations in this report are accompanied by conceptual plans and images that show what a completed project could look like (Figure 1). These images may be used by municipal officials to facilitate discussions with the public and to assist in moving the project from concept to reality. In addition, reference photos exemplify similar improvements made elsewhere in New Jersey and around the country.

Some sections of the proposed route will require significant investments. The conceptualizations included in this report will help to build support for those improvements. Other concepts can be built quickly by the municipality through relatively inexpensive demonstration projects, which can serve as temporary improvements until more permanent upgrades can be made. The concepts and reference images illustrate how a temporary intervention could function. The appendix provides additional resources on short-term implementation strategies. While the conceptualizations focus on a specific route, many of the ideas can be applied to other municipal- owned roads in Eatontown.

In addition to the CSTA Program, the NJTPA also has a pedestrian safety campaign, Street Smart NJ, which communities can participate in to improve safety. Street Smart NJ aims to raise awareness of New Jersey's pedestrian-related laws and change the behaviors that contribute to pedestrian-vehicle crashes. Additional information is included in the appendices.



Figure 1. A photo simulation prepared for this report to show what an improvement could look like.

Background

The North Jersey Transportation Planning Authority (NJTPA) created the Complete Streets Technical Assistance (CSTA) Program in 2018 to assist municipalities in advancing or implementing complete streets, which was a need identified through the Together North Jersey consortium. Complete streets are roads designed for all users, including vehicles, people walking, bicyclists and public transportation. Sustainable Jersey (SJ) and the Alan M. Voorhees Transportation Center (VTC) at Rutgers, the State University of New Jersey, were retained to provide technical assistance for this program. The CSTA Program was designed to support nine municipal governments seeking to implement complete streets in their communities. Municipalities were selected for the program based on the following criteria: the need for technical assistance, commitment to implementation, stakeholder support, and the strength of the municipal team.

Several state and county roads bisect Eatontown creating barriers to bicycle and pedestrian access to three parks located within the borough: Wolcott Park, Wampum Lake Memorial Park, and the F. Bliss Price Arboretum and Wildlife Sanctuary. Prior to applying for the CSTA Program, the borough formed a Complete Streets Advisory Committee to study these barriers and potential means to overcome them. This committee held various walks between the parks to gain understanding of existing conditions and the challenges pedestrians and bicyclists face. The committee used the information gained during these walks to identify a potential route for connecting the three parks provided a number of bicycle and pedestrian infrastructure improvements are made in key locations (Figure 2). In addition to connecting the three parks, this route passes near the Borough Hall, Eatontown Library, the Community Center and the Historical Museum.

In its application to the CSTA Program, the Borough requested assistance in advancing this potential greenway route, specifically by developing conceptualizations to facilitate public involvement by visualizing what potential improvements could look like and highlighting benefits of the plan.

In January 2019, the CSTA project team conducted a site visit with municipal officials and toured the route proposed in the application (Figure 2). After the site visit, the team made modifications to the route based on the findings and selected four specific locations for which concept drawings would be developed (Figure 12). In March 2019, the project team returned to Eatontown and presented the draft plans for four complete streets conceptual designs. During this meeting, the team explained the concepts and discussed how the improvements could work together to create a safe path. The municipality and community stakeholders were asked to provide feedback on the concepts. At the end of the meeting, attendees were asked to select one of the locations to receive additional development. The consensus was that Lewis Street crossing would be the priority.

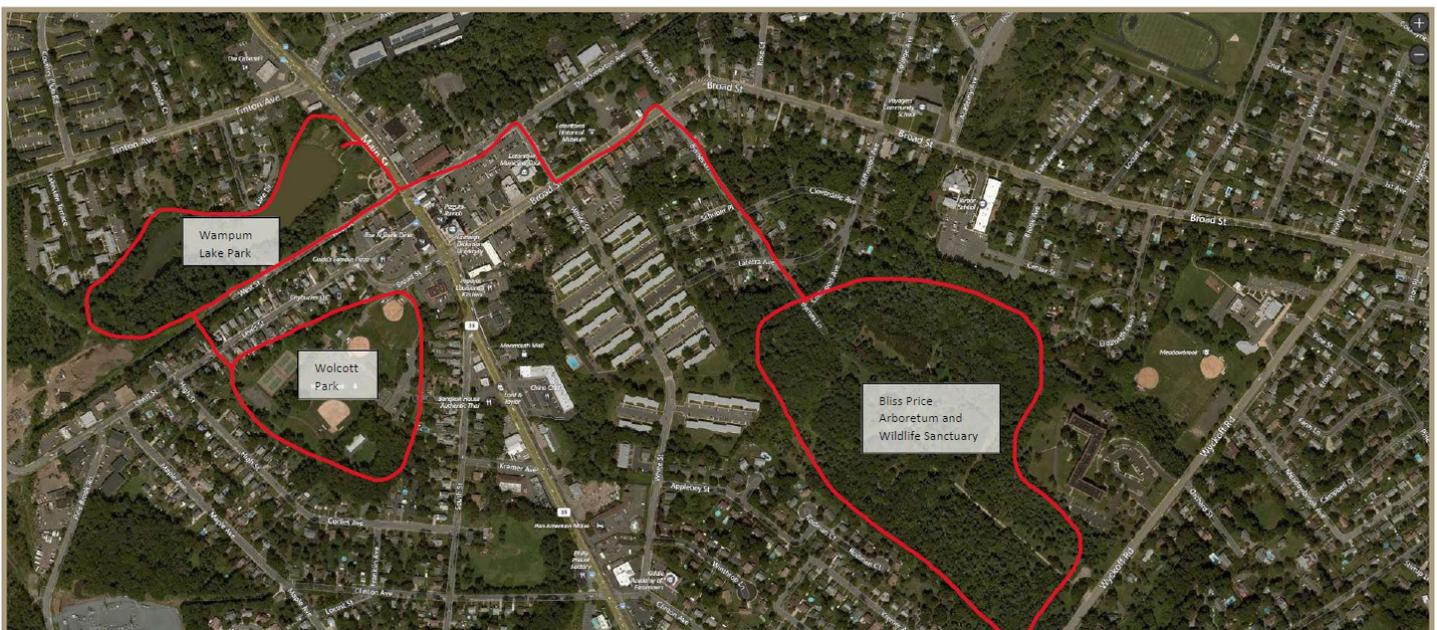


Figure 2. Map of the potential route connecting parks developed by Eatontown and included in their application to the CSTAP.

What is a Complete Street?

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 (Figure 3). Complete streets should be tailored 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 induce a safer setting for students. Meanwhile, streets along transit routes will incorporate the needs of bus and rail commuters by installing benches, shelters, and enhanced lighting and signs.

Regardless of the context, complete 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 be used to 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 down to 5 percent at 20 mph (Figure 4)¹. Complete streets recognize that users of all transportation modes, whether it be car, bus, train, or taxi, at some point during their journey become a pedestrian. Creating a safer environment benefits everyone.

1. Leaf, William A., and David F. Preusser. 1999. Literature review on vehicle travel speeds and pedestrian injuries. DOT HS 809 021. Washington, DC: U.S. Department of Transportation. <http://www.nhtsa.dot.gov/people/injury/research/pub/HS809012.html>.



Figure 3. A complete street, as seen in New Brunswick, New Jersey. No two complete streets are alike, as they should always reflect the context of the street and the character of the community.

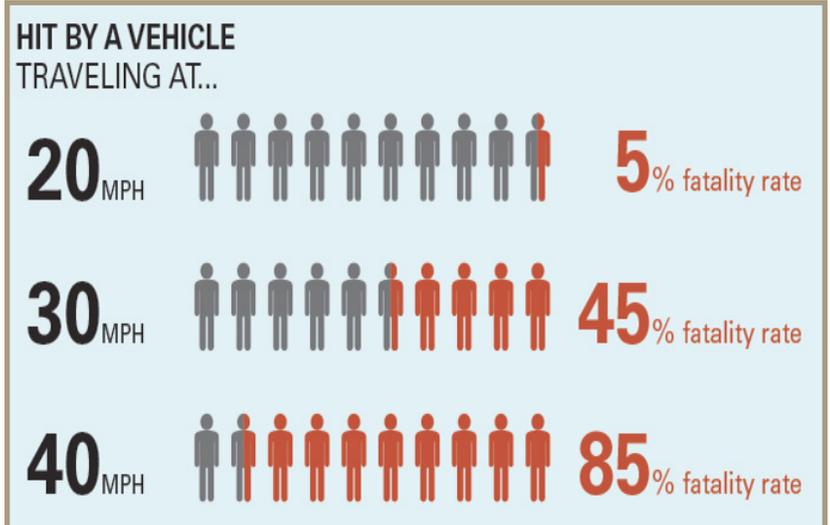


Figure 4. Graphic showing increased fatality rate as vehicle speeds increase.

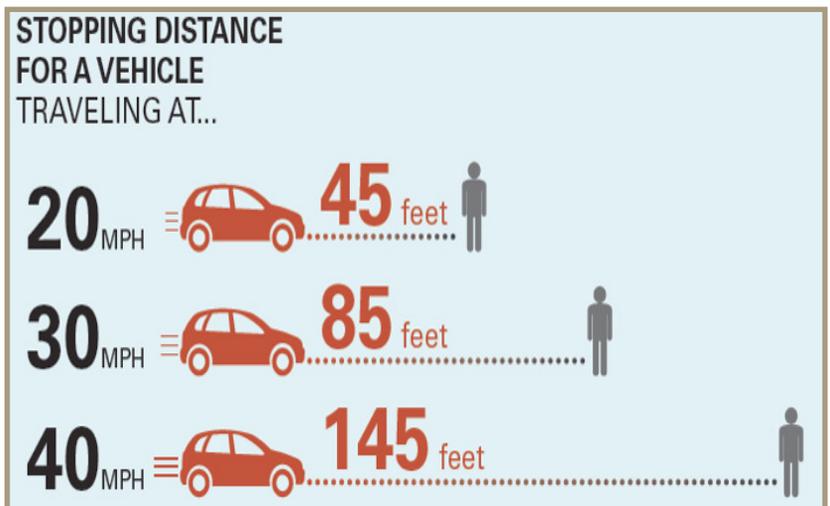


Figure 5. Graphic showing increased stopping distance as vehicle speeds increase.

Benefits of Complete 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. These benefits include mobility, equity, health, quality of life, economic vitality, and environmental health.

Mobility

Creating or enhancing multi-modal transportation options creates mobility opportunities for everyone, including non-drivers, youth, and senior citizens (Figure 6). In turn, increased mobility improves access to jobs and services, which is crucial for people who cannot afford or choose not to own a car, as well as those who are unable to drive due to a disability or their age.

Equity

Complete streets designs decrease the need for people to have automobiles to access opportunity. Transportation costs comprise a significant portion of a household budget, approximately 20 percent in the United States. Much of this is due to the high cost of automobile ownership, including insurance, fuel, maintenance, registration fees, and financing. However, household transportation costs drop to just 9 percent in communities with improved street connectivity and accommodations for other modes. Connected communities allow residents to use less energy and spend less money to get around, allowing for fewer car trips and the use of other less expensive modes of transportation like bicycling, walking, or public transit. Providing a variety of transportation choices across different price points allows families to free up more money for housing or other needs.

Health

Complete streets enhance opportunities for increased walking and bicycling which in turn leads to the numerous health benefits associated with increased physical activity (Figure 7). The Center for Disease Control (CDC) supports complete streets as a means to prevent obesity.

Quality of Life

Livable, walkable communities diminish the need for automobiles. Walking or bicycling around town creates a sociable environment, fostering interactions between family, friends, or clients and increasing community involvement. These interactions, in turn, entice users to enjoy the surroundings they would otherwise ignore in a car. A reduction in vehicle use can also increase the quality of life thanks to reductions in noise and stress associated with congestion and crashes (Figure 8).



Figure 6. When a street lacks accessible sidewalks and ramps, it is not complete.



Figure 7. Trails, such as this one in Monroe, New Jersey, can encourage exercise and lead to improved health.



Figure 8. Complete Streets in Asbury Park help foster a lively social environment.

Economic Vitality

Improving streetscapes revitalizes 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 that they may have driven past before. Such is the experience in Somerville, New Jersey, where one block of Division Street was converted to a pedestrian plaza. The area witnessed a sharp decline in vacant commercial properties; vacancy dropped from 50 percent to zero after the plaza was developed (Figure 9)².



Figure 9. Division Street in Somerville was converted into a pedestrian plaza that has become a popular gathering space.

Environmental Health

By reducing automobile use, complete streets can contribute to cleaner air. Additional sustainable design elements installed along complete streets can also bring other environmental benefits. For example, landscape improvements (green streets) can reduce impervious cover, reduce or filter stormwater runoff, and contribute to water quality improvement (Figure 10).



Figure 10. Green infrastructure used to narrow the roadway and provide a shorter crossing distance for pedestrians.

Complete Streets in New Jersey and Eatontown

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. In 2010, the National Complete Streets Coalition ranked NJDOT's complete streets policy first among 210 state, regional, county, and municipal policies nationwide. 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, 153 municipalities have implemented complete streets policies affecting 3.8 million (44 percent) of the state's residents³.

Both Monmouth County and the Borough of Eatontown have adopted complete streets policies. In 2017, the Borough of Eatontown created an ad hoc group, the Complete Streets Advisory Committee, to investigate and start a complete streets effort. The group started conducted walking audits of pedestrian pathways in November 2017 to identify repair needs and possible improvements, and the group plans to hold regular walks in the future.

2. "Complete Streets Case Study: Somerville, New Jersey," Alan M. Voorhees Transportation Center, 2016.

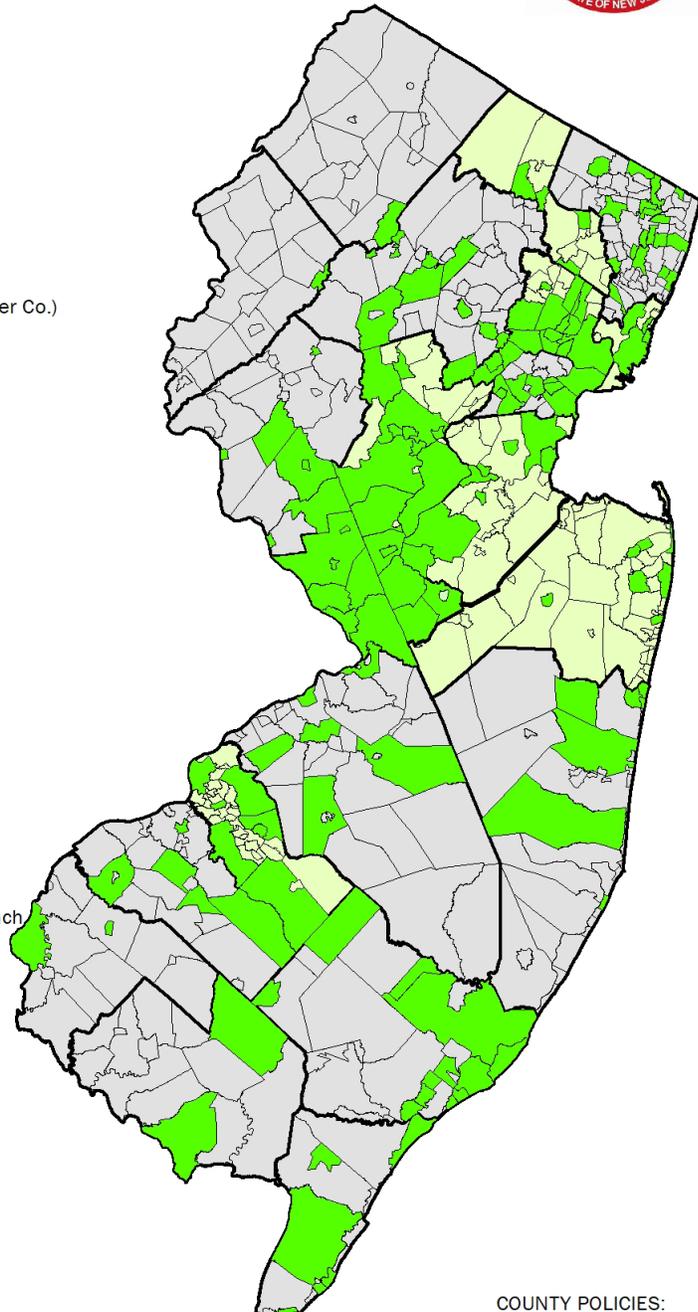
3. New Jersey Bicycle and Pedestrian Resource Center, "NJ Complete Streets Policy Atlas," 2018. <http://njbikeped.org/complete-streets-2/>.

New Jersey Complete Streets Policies as of June 20, 2019



MUNICIPAL POLICIES:

1. City of Asbury Park
2. City of Atlantic City
3. Borough of Bay Head
4. Township of Bedminster
5. Borough of Bergenfield
6. Berkeley Heights Township
7. Township of Bloomfield
8. Borough of Bloomingdale
9. Township of Bordentown
10. Borough of Bound Brook
11. Township of Bridgewater
12. City of Brigantine
13. Borough of Buena
14. City of Burlington
15. Borough of Caldwell
16. Borough of Califon
17. City of Camden
18. City of Cape May
19. Borough of Chatham
20. Township of Cherry Hill
21. Township of Chester
22. Township of Cranford
23. Township of Denville
24. Town of Dover
25. Township of Downe
26. Township of East Amwell
27. City of East Orange
28. Township of East Windsor
29. Borough of Eatontown
30. City of Egg Harbor
31. City of Elizabeth
32. Borough of Emerson
33. Township of Ewing
34. Borough of Fair Haven
35. Borough of Fanwood
36. Borough of Far Hills
37. Borough of Flemington
38. Borough of Fort Lee
39. Township of Franklin (Hunterdon)
40. Township of Franklin (Somerset)
41. Borough of Freehold
42. Borough of Frenchtown
43. City of Garfield
44. Borough of Gibbsboro
45. Borough of Glassboro
46. Borough of Glen Ridge
47. Township of Gloucester
48. City of Hackensack
49. Town of Hackettstown
50. Borough of Haddon Heights
51. Township of Hamilton
52. Town of Hammonton
53. Borough of Harvey Cedars
54. Borough of Haworth
55. Borough of Highland Park
56. Borough of Hightstown
57. Township of Hillsborough
58. City of Hoboken
59. Borough of Hopatcong
60. Borough of Hopewell
61. Township of Hopewell
62. Township of Irvington
63. City of Jersey City
64. Township of Lacey
65. Township of Lakewood
66. City of Lambertville
67. Township of Lawrence
68. Leonia Borough
69. City of Linden
70. City of Linwood
71. Township of Little Falls
72. Township of Livingston
73. City of Long Branch
74. Township of Long Hill
75. Borough of Madison
76. Township of Mantua
77. Borough of Manville
78. Township of Maplewood
79. City of Margate
80. Borough of Maywood
81. Township of Medford
82. Borough of Metuchen
83. Township of Middle
84. Township of Millburn
85. Borough of Milltown
86. Township of Monroe (Gloucester Co.)
87. Township of Montclair
88. Township of Montgomery
89. Borough of Montvale
90. Township of Moorestown
91. Town of Morristown
92. Borough of Mount Arlington
93. Borough of Netcong
94. City of New Brunswick
95. Borough of New Milford
96. Borough of New Providence
97. City of Newark
98. Borough of North Haledon
99. City of North Wildwood
100. City of Northfield
101. Borough of Northvale
102. City of Ocean City
103. Township of City of Orange
104. Pemberton Township
105. Borough of Pennington
106. Township of Pennsville
107. City of Perth Amboy
108. Township of Plainsboro
109. City of Pleasantville
110. Borough of Point Pleasant
111. Borough of Point Pleasant Beach
112. Borough of Pompton Lakes
113. Princeton
114. Borough of Ramsey
115. Township of Randolph
116. Borough of Raritan
117. Township of Raritan
118. Borough of Red Bank
119. Village of Ridgewood
120. Borough of River Edge
121. Township of River Vale
122. Township of Robbinsville
123. Borough of Roselle
124. Borough of Roselle Park
125. Borough of Rutherford
126. Township of Scotch Plains
127. Borough of Sea Bright
128. Town of Secaucus
129. City of Somers Point
130. Borough of Somerville
131. Township of South Brunswick
132. Township of S. Orange Village
133. City of Summit
134. Borough of Tenafly
135. Township of Toms River
136. City of Trenton
137. City of Union City
138. City of Ventnor
139. City of Vineland
140. Township of Voorhees



COUNTY POLICIES:

1. Camden County
2. Essex County
3. Hudson County
4. Mercer County
5. Middlesex County
6. Monmouth County
7. Passaic County
8. Somerset County
141. Township of West Orange
142. Township of West Windsor
143. Township of Westampton
144. Town of Westfield
145. Borough of Westwood
146. City of Wildwood
147. Township of Winslow
148. Borough of Woodbine
149. Township of Woodbridge
150. City of Woodbury
151. Borough of Woodstown
152. Township of Woolwich
153. Township of Galloway

- NJDOT Complete Streets Policy
- County Complete Streets Policies
- Municipal Complete Streets Policies

Figure 11. Complete Streets Policies in New Jersey, as of June 20, 2019.

Study Area

The Borough of Eatontown is home to approximately 12,258 residents and occupies an area of 5.8 square miles. The median age is 41.9, and 37 percent of residents have a college degree. The community enjoys a 52 percent homeownership rate, and an estimated median household income of \$60,188 (US Census Bureau, 2017).

Eatontown is a suburban community in Monmouth County, located just east of the Garden State Parkway. The borough is bisected by several major state and county roads: State Route 35, State Route 36, and County Road 547. Monmouth Mall occupies a large area in the geographic center of the borough. Other commercial establishments line the major state and county roads. The southern side of Eatontown is home to large industrial and warehousing businesses along the aptly named Industrial Way. On the north side of the borough and less than a mile away, the nearly 1,126 acres former Fort Monmouth army base, which was closed in 2011, is being prepared for reuse and redevelopment. In 2017, the roadway through the base was reconstructed and reopened by the county.

Overall, the borough's built environment is not oriented toward pedestrian activity as a mode of transportation. Walking for transportation is difficult as many residential neighborhoods have limited access points and the major highways lack sidewalks and crosswalks. However, Eatontown is seeking to change that by improving access to three parks: Wolcott Park, Wampus Lake Memorial Park, and the F. Bliss Price Arboretum and Wildlife Sanctuary. The three parks are located in the northern part of the municipality, near the Municipal Building. Wolcott Park is a 16-acre park that provides a number of recreational facilities, including a covered pavilion, tennis courts, and softball fields.

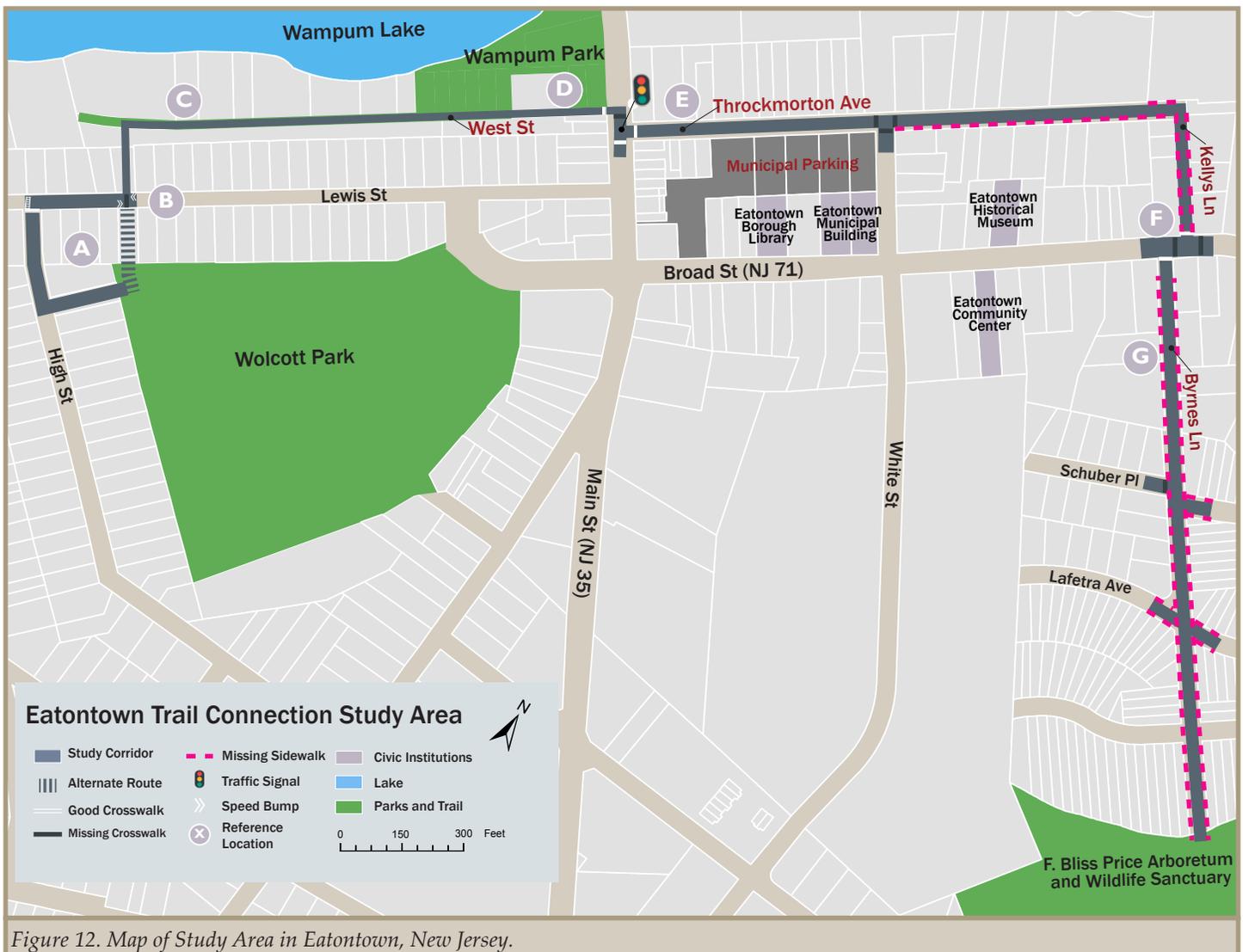


Figure 12. Map of Study Area in Eatontown, New Jersey.

Wampum Lake Memorial Park is located just to the north of Wolcott Park. The two parks are separated by Lewis St, which is a local, two-lane road lined with single-family homes. Wampum Park contains a walking trail in a woodland setting surrounding the 9.265-acre Wampum Lake. The park also features a plaza, gazebo, and benches. The F. Bliss Price Arboretum and Wildlife Sanctuary is located roughly a half mile to the east and is separated from the other parks by State Route 35 (Main Street), State Route 71 (Broad Street), and residential neighborhoods. Wyckoff Road (County Road 547) marks the southern border of the Arboretum.

The shortest direct route between the three parks is using State Routes 71 and 35 (Figure 13). However, these roads are regional connectors, heavily trafficked and thus not attractive for bicyclists and pedestrians due to high traffic volumes and limited amenities. Instead, the proposed multi-use trail to connect the three parks uses municipal roads, municipal property, and properties that could potentially be acquired by the municipality. The proposed route includes High Street, Lewis Street, West Street, Throckmorton Avenue, Kellys Lane, and Byrnes Lane. It also provides connectivity to Borough Hall, Eatontown Library, the Community Center and the Historical Museum. The proposed route does cross State Routes 35 and 71, which will require coordination with the state at those locations.



Figure 13. State Route 35 in Eatontown, looking south to Route 71.

Data

Traffic

According to the New Jersey Department of Transportation, Broad Street (Route 71) had an annual average daily traffic (AADT) of 9,834 vehicles in 2015 (the most recent year for which data is available). State Route 35, which intersects Broad Street and Lewis Street near Wolcott Park, had an AADT of 28,609 in 2017. Traffic data is not available for the municipal roads.

Crash History

The municipal roads included in the proposed route do not have an extensive history of crashes involving pedestrians or bicyclists. From 2014 to 2018, there was one reported crash involving a pedestrian, which occurred on State Route 35 near Broad Street. There were no reported crashes involving bicyclists.

Table 1. Pedestrian and bicycle crashes in study area, 2014-2018.

Location	Date	Time	Crash Type	Pedestrian Age	Pedestrian Gender	Severity	Intersection	Lighting
State Route 35 and Broad Street	12/17/2016	20:13	Pedestrian	38	Female	Minor Injury	No	Dark (Street Lights on Continuous)

Planned Route and Recommendations

Wolcott Park / Lewis Street Crossing

The proposed route for the Eatontown Greenway begins in the northwest corner of Wolcott Park, in an existing paved parking lot. This parking lot is connected to various amenities within the park (i.e., tennis courts and baseball fields) with multi-use paths. Access to the parking lot is through a narrow 12-foot-wide driveway that leads to High Street. This driveway does not have any separate bicycle or pedestrian amenities.

The project team identified two potential routes from Wolcott Park (Location A in Figure 12) to Wampus Park (Location D). The more direct route requires access through a vacant privately-owned property that lies between the park and Lewis Street to the North (see Direct Connection Alternative section). This parcel is directly across Lewis Street from a borough-owned vacant parcel that connects to the West Street Extension, which is a borough-owned paper street that can provide an off-road trail connection to Wampus Park.



Figure 14. Wolcott Park and Lewis Street Aerial Map.

Recommendation: Build a new trail across these properties to provide a direct connection for bicyclists and pedestrians.

High Street Alternative

The municipality has identified significant challenges in acquiring the privately-owned property on Lewis Street. As such, a second route, the High Street Alternative, was designed using the existing park driveway, High Street and Lewis Street. In Figure 12, the direct connection is marked with a dashed line to indicate it as an alternative route. Both routes connect to the same proposed Lewis Street crossing that is discussed later in this report.

In this option, bicyclists and pedestrians would use the existing park driveway to access High Street. The narrow (12-foot) driveway is located between two private homes, on a 25-foot wide property. It is also lined by mature trees, which creates an attractive entrance to the park and provides a barrier between the homes and the driveway (Figure 15). The driveway is 200 feet long with limited vehicular traffic, making it suitable for a shared zone. In a shared zone, motor-vehicles, bicycles, and pedestrians use the same roadway, with faster road users yielding to slower road users (likely how the space is used today). Safety can be improved by the addition of new signage and street striping that codifies this use (Figure 16, Figure 17).



Figure 15. Existing park driveway, looking southwest from the Wolcott Park parking lot.



Figure 16. Shared zone signage in Washington, DC. Photo: Mike Lydon.

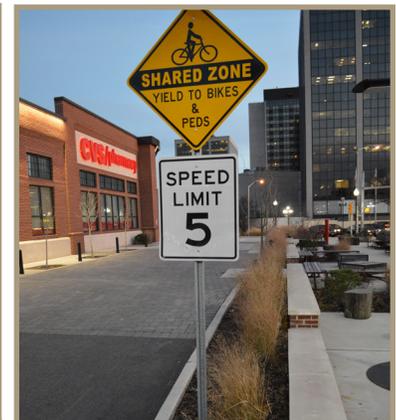


Figure 17. Shared zone signage in Morristown, NJ.

High Street is a quiet residential street lined with single-family detached homes. The road is 30 feet wide, with a travel lane in each direction and room for parking. Sidewalks exist in front of most homes but are discontinuous.

Recommendation: Provide a continuous sidewalk along High Street between the park driveway and Lewis Street to create a safe and accessible path for pedestrians.

Consider: Creation of a temporary on-street sidewalk using paint, plastic bollards, and/or parking stops (Figure 18).

Lewis Street is a municipal roadway with continuous sidewalks in good shape on both sides of the street. While Lewis Street sidewalks provide a suitable path for pedestrians, they are not wide enough to support bicycle traffic (Figure 19).

Recommendation: Add sharrows (shared-lane markings) and signage to Lewis Street to accommodate bicyclists (Figure 20, Figure 21).

This treatment assists bicyclists by reminding drivers that bicyclists have a legal right to use the full travel lane in New Jersey. They also remind bicyclists to position themselves away from parked cars and gutters. While sharrows do provide a benefit for experienced bicyclists, they do not provide the level of comfort or security that bicycle lanes and bicycle paths do. As such, novice bicyclists and families are unlikely to use the road and instead will attempt to navigate the sidewalk.

Removing the parking on Lewis Street would allow for the installation of exclusive bicycle lanes between High Street and the proposed trail in both directions (Figure 22). This would impact seven residences, all of which have their own driveways.



Figure 18. On-street sidewalk in Seattle, WA. Photo: Seattle Department of Transportation.



Figure 19. Bicyclist riding southwest on Lewis St.



Figure 20. Sharrows and "Bicycle May Use Full Lane" sign in Morristown, NJ.



Figure 21. Lewis Street with shared lanes.



Figure 22. Lewis Street with bicycle lanes.

Direct Connection Alternative

In this option, the municipality would seek access to the existing vacant parcel to provide a direct trail connection between Wolcott Park and Lewis Street (Figure 23). A gateway treatment near Lewis Street would add visibility to a valuable public space that is mostly hidden behind houses.

The multi-use trail should be at least 10 feet wide (preferably 12 feet) to allow bicyclists and pedestrians to safely use the trail in both directions and provide 18 feet of buffer space on either side of the trail. The space on either side of the path could be populated with new trees, benches, and green stormwater infrastructure (such as a rain garden), or fitness stations.

Lewis Street Crossing

Both alternatives would direct pedestrians and bicyclists to the same waypoint: the existing speed bump on Lewis Street between the two vacant parcels (Location B in Figure 12).

Recommendation: Replace the existing speed hump on Lewis Street between the two vacant parcels with a raised midblock crosswalk across Lewis Street (Figures 24 and 28).

The speed bump can be modified to create a raised crosswalk (Figure 24), which helps decrease vehicle speeds like a speed bump, but is flat on top to act as a crosswalk. The raised crosswalk should be the same height as the sidewalk, so trail users can cross without having to dip to street level and back up again. If drainage is a concern, a metal bridge plate can be installed over the gutter (Figure 25).

Signage with pedestrian activated lights can help drivers anticipate people in the crosswalk. These signs look like standard crosswalk signs but produce a flashing light pattern pedestrians activate them. They can be activated passively with a sensor that detects pedestrians, or via a button that pedestrians push when they are ready to cross. This flashing light is highly visible to motorists, and more drivers comply with the requirement to stop for pedestrians when a flashing light is used. As the lights are only activated on demand, and last for just a few seconds, they are not disruptive to nearby residents. These installations can be powered by solar panels or connection to the electrical grid. The lights can be embedded into the crosswalk signage, or located directly below the sign (Figure 26, Figure 27). Overhead lighting is also important to ensure that pedestrians and bicyclists are visible to oncoming traffic.



Figure 23. Looking north into the vacant parcel, from the Wolcott Park parking lot.



Figure 24. Example of a raised crosswalk in Union, NJ.



Figure 25. Example of a covered gutter in Rahway, NJ.



Figure 26. Embedded lights. Photo: TrafficSafety.com



Figure 27. Rectangular Rapid Flashing Beacon (RRFB). Photo: TAPCO



Figure 28. Plan showing proposed connection between Wolcott Park and a new trail along West Street. Both the High Street Alternative and the Direct Connection Alternative are shown.



Figure 29. Photo simulation of proposed trail crossing on Lewis Street, looking east. Simulation shows a raised crosswalk, overhead lighting, and new pedestrian activated signage.

West Street

From Lewis Street, the proposed trail continues north across a vacant property owned by the municipality (Figure 30). As with the Direct Connection Alternative, the trail should have a minimum width of 10 feet (12 feet preferred). The remaining space on each side of the trail should be landscaped to create a buffer between the trail and the homes and can host green stormwater infrastructure or park amenities such as benches.

The biggest challenge in connecting to West Street is the significant change in grade between the vacant parcel and the municipal right-of-way (Figure 31). A bridge, compliant with the Americans with Disabilities Act (ADA), would be needed to navigate the gap.

Most of West Street is a graded but unpaved municipal-owned right-of-way that offers a fantastic opportunity to create a landscaped multi-use trail (Location C in Figure 12 and Figure 32). The land on the north side of West Street is owned by the municipality and, except for one structure used for storage, is undeveloped and functions as an unofficial extension of Wampum Park. A 12-foot-wide paved trail would provide a safe and attractive route for bicyclists and pedestrians and can support occasional access use by utility company or municipal vehicles.

Installing lighting along the trail can ensure it is safe for users after dark—critical when the sun sets before 5 p.m. in the winter. Fully shielded LED lighting should be used to avoid spillover to nearby private properties.

Figure 33 shows the Middlesex Greenway in Metuchen, New Jersey. It provides an excellent example of how a fully developed trail could look in Eatontown.



Figure 30. Looking north into the vacant parcel from Lewis St.



Figure 31. Looking south towards the vacant parcel from the West Street right of way.



Figure 32. Looking east on West Street.

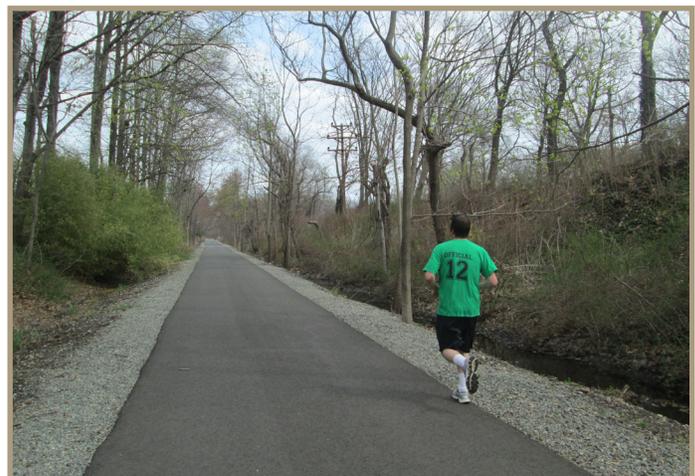


Figure 33. Middlesex County Greenway. Photo: NJ SRTS

Wampum Park and Route 35

The eastern portion of West Street that is closest to Route 35 is paved and serves as a parking area for Wampum Park. After crossing the parking lot, bicyclists and pedestrians could continue onto the wide plaza area on the northwest corner of West Street and Route 35 (Location D in Figure 12). This plaza is connected to an existing 4-foot-wide sidewalk, which is too narrow to support bicycle traffic, on the east side of Route 35 (Figure 34). Just 50 feet south of West Street, the sidewalk widens to 15 feet (Figure 35).



Figure 34. Wampum Park across West Street, looking north. The existing narrow sidewalk is visible in the foreground.



Figure 35. A narrow sidewalk leads to a new crosswalk across Route 35. Consider installing an off-street path for bikes from West Street to the crosswalk at Throckmorton Street.

Recommendation: Investigate the feasibility of installing an off-street bike path on the west side of Route 35 between West Street and Throckmorton Street, to align with the bike path that is recommended for Throckmorton Street below. Alternatively, investigate the feasibility of widening the sidewalk on the west side of Route 35 between West Street and Throckmorton Avenue to create a multi-use path to accommodate both pedestrians and bicyclists. Prerequisite to implementation is submission of a plan sheet to NJDOT for review.

Recommendation: Add Manual on Uniform Traffic Control Devices (MUTCD) compliant bike crossing striping on Route 35 to connect with new Throckmorton Avenue bicycle path.

The traffic signal at the intersection of Route 35 and Throckmorton Avenue was replaced in 2018, making it fully ADA compliant. Pedestrians and bicyclists will be able to safely access Throckmorton Avenue with no modifications to the intersection.

Throckmorton Avenue

Throckmorton Avenue is a municipal road with two-way traffic and parking on the north side (Figure 36). The street is not heavily trafficked, as the largest adjacent land use is a municipal parking lot with multiple access points (Figure 37). About two dozen residential properties rely on Throckmorton Avenue for access. Sidewalks are continuous between Route 35 and White Street but are discontinuous east of that intersection.



Figure 36. Throckmorton Street, looking west to the intersection with Route 35. The space currently used by the eastbound lane could be reallocated for the exclusive use by bicyclists and pedestrians.



Figure 37. Throckmorton Street, looking east. Although sidewalks exist on both sides of the roadway, the large amount of parked cars and the lack of trees makes walking and bicycling unattractive.

The large municipal parking lot creates a gap in the street wall, where no buildings or hedges line the edge of the sidewalk, which makes the public space less clearly defined. Compounded by an absence of street trees, the road feels wider than it is, and is not attractive for walking or bicycling.

Recommendation: Eliminate the eastbound vehicle travel lane and add a two directional bike lane on the south side of the roadway (Figure 38). Conversion from a two-way street to a one-way street will need to be justified within an engineering report and submitted to the Regulation Section of the Bureau of Traffic Engineering at NJDOT for review.

Throckmorton Avenue can be transformed into a comfortable place to bicycle and walk with the conversion of the south side of the roadway into a bidirectional bicycle path with landscaping (Figure 38). Currently, eastbound access to the avenue is only possible via a right turn from the northbound lanes on Route 35, as left turns are prohibited. As such, this change is unlikely to cause any traffic issues. Alternative access to the municipal parking lot is available from Broad Street and White Street using existing driveways.

In the short term, the new shared-use path can be quickly implemented using paint, plastic soft-hit bollards, signage, and temporary landscaping (Figure 39). This approach, referred to as a demonstration project or Tactical Urbanism, uses short-term, low-cost, scalable interventions to effect long-term change related to street safety and public space. This method can draw attention to perceived shortcomings, widen civic engagement, test interventions, and inspire action. Demonstration projects champion flexibility because improvements can be temporary. This allows residents and policymakers to witness the improvement and determine its effects. It also allows for data to be collected, and the final permanent design to be modified based on what was learned during the temporary installation. If the temporary on-street bicycle lanes are deemed a success, Eatontown can work toward a permanent solution.

A permanent trail is best suited at sidewalk level, allowing for 15 feet of space to be distributed between pedestrians and bicyclists. Additional permanent improvements could include improved lighting, trees, green infrastructure, and amenities such as benches and water fountains (Figure 40). For both the temporary and permanent designs, how the trail interacts with driveway entrances is critical. Drivers should be notified of the trail through signage and paint.

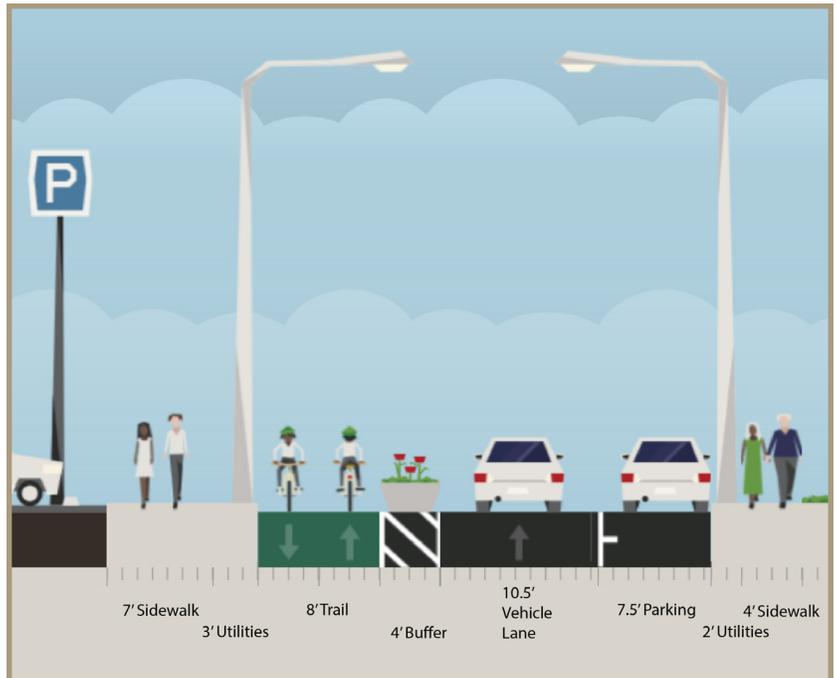


Figure 38. Throckmorton Ave. with an on-street bicycle path instead of an eastbound travel lane, looking westward.



Figure 39. Two way bicycle lane in New Brunswick, NJ.



Figure 40. Multi-use sidewalk with landscaping and amenities in Clovis, California.



Figure 41. Plan view of bicycle trail on Throckmorton Avenue.



Figure 42. Photo render of bicycle trail on Throckmorton Avenue, looking eastward.

Improvements for pedestrians should include the addition of high visibility crosswalks throughout the corridor. Except for the Route 35 intersection, curb ramps along Throckmorton Avenue are not ADA compliant and should be replaced. Figure 42 shows how the improvements can transform Throckmorton Avenue into a complete street.

Throckmorton Avenue ends at Kellys Lane. Beyond the end of Throckmorton to the east, a utility right-of-way (likely a former rail line) continues through Fort Monmouth and into Long Branch (Figure 43). It is recommended that this right-of-way be explored for a potential extension of the multi-use trail.

Kellys Lane

Kellys Lane is a quiet residential street with a width under 20-feet and no sidewalks (Figure 44). The road likely sees limited traffic volumes as only five properties have driveways fronting it. If it were converted to a one-way road northbound, there would be space to continue the multi-use trail proposed for Throckmorton Avenue. Another alternative is to allow two-way traffic but to sign the roadway as a shared zone, similar to the treatment proposed for the Wolcott Park driveway.

Route 71 (Broad Street) Crossing

Continuing the proposed trail across Route 71 onto Byrnes Lane is challenging for a number of reasons. Kellys Lane is offset from Byrnes Lane by 60 feet, which requires pedestrians and bicyclists to use Route 71 (Figure 45). Just east of Kellys Lane, Route 71 curves to the south, limiting visibility to drivers approaching the intersections. Although the speed limit on this section of the road is 30 mph, and there is only one lane in each direction, the generous width of the pavement (36 feet) supports and encourages higher speeds. This means extra care must be taken in designing a safe crosswalk. Fortunately, the Route 71 cartway is wide enough to support a road diet and the addition of bike lanes, possibly configured as two directional lanes, on the north side of the street between Byrnes and Kellys lanes. As a state road, any proposed improvements must be approved and built by NJDOT.

Recommendation: Conduct an engineering study to evaluate the feasibility of narrowing the travel lanes to 11 feet in each direction, providing 14 feet within the cartway that may be designed to accommodate bicycle travel between Byrnes and Kellys Lane., and a curb extensions for pedestrian crossings. Supplement the proposed crosswalk with flashing pedestrian lights, similar to the Lewis Street crossing, overhead lighting, and advance warning signage for drivers. A pedestrian traffic signal (such as a High-Intensity Activated Crosswalk beacon) would provide maximum safety, but may not be warranted with current pedestrian volumes.

Consider: Municipal officials have also expressed interest in a mid-block pedestrian crosswalk in front of the Eatontown Community Center.



Figure 43. Eastern end of Throckmorton Avenue. Kellys Lane is on the right. The utility right of way continues straight ahead. Image: Google Streetview.



Figure 44. Looking north onto Kellys Lane from Route 71.



Figure 45. Byrnes Lane and Kellys Lane as seen from Route 71, looking east toward the curve in the roadway. The proposed crosswalk would cross Route 71 at the closest corner.

Byrnes Lane

Byrnes Lane is a quiet residential street serving a small neighborhood of less than 40 homes. The neighborhood can also be accessed through Cliffwood Avenue, which intersects with Route 71 to the east. The only significant traffic generator is the Braun Funeral Home. Although that building fronts Route 71, the parking is accessed using Byrnes Lane.

Byrnes Lane is 30-feet wide and allows street parking, although all the homes have driveways. There are no sidewalks in this residential neighborhood. At the southern end of the neighborhood, Byrnes Lane terminates at the Arboretum. The entrance is not signed, and there are no amenities, but local residents know of it.

Two opportunities exist for improving bicycle and pedestrian access to the Arboretum via Byrnes Lane.

Recommendation: Create an on-road sidewalk, similar to what is proposed for High Street, providing a dedicated space for walking, at the expense of space used for parking (Figure 47). Since the road sees little traffic, and street parking is uncommon, it may be possible to accommodate bi-directional traffic, parking, and the on-street sidewalk.

Consider: Incorporate features of a bicycle boulevard on Byrnes Lane and Cliffwood Avenue. Bicycle boulevards are “linear corridors of interconnected, traffic-calmed streets where bicyclists are afforded an enhanced level of safety and comfort,” according to NJDOT. This concept falls under a number of different names, including “neighborhood greenway” and “quiet streets.”

The benefits extend beyond bicyclists, as implementation increases the safety and comfort for pedestrians and drivers as well. The 2017 New Jersey Complete Streets Design Guide states that bicycle boulevards are appropriate for roadways with a traffic volume under 2,500 vehicles per day, which is the case for Byrnes Lane and Cliffwood Avenue. Adopting this model can be effective in encouraging bicycling and walking while reducing vehicular speeds.

Bicycle boulevard treatments include signs, pavement markings, and other traffic-calming measures to discourage through-trips by motor vehicles, while accommodating local access. Essentially, a bicycle boulevard sends a message that pedestrians and bicyclists have priority along the corridor, and drivers need to be especially careful, or select an alternative route.

Like the shared zone proposed earlier, 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 signs and pavement markings that need to be deployed: regulatory and educational/informational. Regulatory markings include speed limit signs, marked crosswalks, and instructions to drivers, bicyclists, and pedestrians where appropriate (Figure 48). This can include the “Bicycles May Use Full Lane” (R4-11) signs. Informational signage may include branding, wayfinding, and explanations of the project purpose. It is important that the branding be developed with community input.



Figure 46. Looking north on Byrnes Lane.

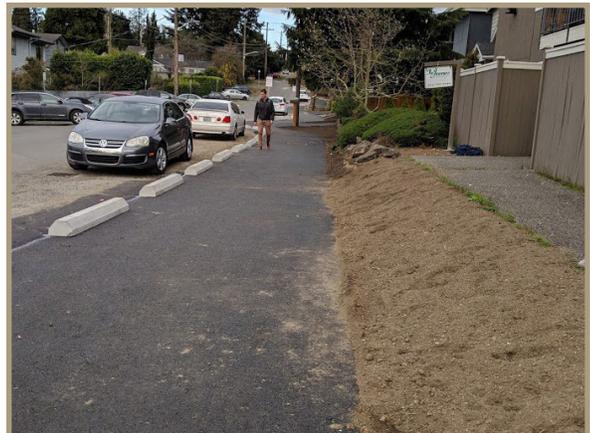


Figure 47. On-street sidewalk in Seattle. Photo: SDOT.



Figure 48. Bicycle Boulevard signage in McKinley, Texas.

Pavement markings reinforce the message being delivered by the signs. Large shared-lane pavement markings advise bicyclists on where to position themselves, and remind drivers that bicyclists may use the center of the lane (Figure 49). A low speed limit (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 to prevent collisions, and also makes 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 traffic circles). Traffic calming solutions can be combined with other measures to address other potential community goals, such as the addition of green infrastructure to a chicane (Figure 50). Green infrastructure refers to projects that reduce flooding, add greenery, and address health concerns through the addition of vegetation. For example, a curb extension can be built as a rain garden to collect stormwater and add native plants.

Eatontown is also encouraged to identify similar corridors around the municipality where bicycle boulevard treatments may be appropriate.

Bicyclists need safe and convenient bicycle parking at their destination. Currently, the entrance to the Arboretum is not well marked and lacks amenities (Figure 51). The addition of bicycle racks along with benches and tables could encourage more residents to take advantage of a great local amenity. Figure 52 is an example of a plaza built quickly using paint and movable furniture.



Figure 49. Pavement markings in Ocean City, New Jersey.



Figure 50. Traffic calming chicanes with green infrastructure in Shoreline, WA.



Figure 51. The current access point to the Arboretum, from Byrnes Lane.



Figure 52. Tontine Crescent Tactical Plaza in Boston, MA. Photo: Ground Inc. A permanent design is in the works.

Conclusion

The Borough of Eatontown is fortunate to have a number of attractive parks. Unfortunately, access to these parks on foot or by bicycle is constrained by a lack of sidewalks and bicycle lanes, barriers created by major state roads, and disconnected neighborhoods. Building on a corridor identified by the local Complete Streets Advisory Committee, this report recommends a number of improvements that can be undertaken to create the Eatontown Greenway. This new trail would provide a safe and attractive connection between three parks: Wolcott Park, Wampum Lake Memorial Park, and the F. Bliss Price Arboretum and Wildlife Sanctuary.

Many of these improvements can be done quickly and at a low cost using demonstration projects or as part of the regular maintenance regimen for the corridor. By making the changes quickly with low-cost materials, the municipality can receive meaningful feedback from residents based on their real-world experience. If the improvements are found to be ineffective, or have unintended consequences, they can be removed just as quickly.

Other improvements, such as building a trail from Lewis Street to West Street, cannot be tested in this manner. For those proposals, the conceptualizations in this report will help residents envision the potential changes and share their thoughts. As feedback is collected, the municipality can move to acquire grant funding to complete the entire greenway.



Appendix

A. StreetSmart Campaign Resources

B. Potential Funding Resources

C. Design Resources

A. StreetSmart Campaign Resources



STREET SMART NJ FACT SHEET

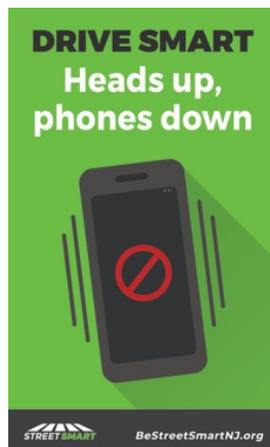
What is Street Smart NJ?

Street Smart NJ is a public education, awareness and behavioral change pedestrian safety campaign created by the North Jersey Transportation Planning Authority (NJTPA). The campaign combines grassroots public awareness efforts with social media, public outreach efforts and law enforcement to address pedestrian safety.

There are a number of different ways communities can participate. Nearly all campaigns enlist the involvement of community leaders, businesses and organizations and ask police to step up enforcement of pedestrian safety laws. Some campaigns have an evaluation component, including pre- and post-campaign surveys and observations at crash prone locations. Smaller campaigns may be limited to handing out information at community events and displaying signage around town.

More than 80 communities have participated in Street Smart in some way since the program's inception in 2013. NJTPA's goal is to increase that number to 100 campaign partners. Communities everywhere are invited to use the strategies and materials on the Street Smart website, bestreetsmartnj.org, to create their own campaigns. The website includes a 'How To' guide, printable materials, social media posts and a sample press release among other resources.

NJTPA staff are available to sit down with interested towns to discuss how to bring Street Smart NJ to their community.



BeStreetSmartNJ.org

[StreetSmartNJ](https://www.facebook.com/StreetSmartNJ)

[NJStreetSmart](https://twitter.com/NJStreetSmart)

Why do we need Street Smart?

Part of the impetus behind Street Smart NJ was that the Federal Highway Administration identified New Jersey as a pedestrian “focus” state due to the high incidence of pedestrian injuries and fatalities. In 2018, 175 pedestrians died as a result of pedestrian-vehicle crashes in New Jersey. From 2014 to 2018, 870 pedestrians were killed and thousands were injured on New Jersey’s roadways. That translates to one death every two days and 11 injuries daily.



Campaign Messages

The Street Smart NJ campaign urges pedestrians and motorists to keep safety in mind when traveling New Jersey’s roads. The program’s core message is “Walk Smart – Drive Smart – Be Street Smart” with specific messages including We look before crossing; Heads up, phones down; We slow down for safety; We stop for people – it’s the law; We use crosswalks; We cross at corners; We cross at the light; and We wait for the walk. The NJTPA has developed pedestrian safety tip cards, in English and Spanish, for public distribution built around the messages. The messages are also printed on posters, banners, street signs, coasters, tent cards and coffee sleeves.

Police Enforcement

One of the keys to Street Smart NJ’s success is law enforcement participation. Police officers engage and educate, rather than simply issue citations. In many communities that participate in Street Smart NJ police have issued warnings rather than citations and even rewarded good behavior with coupons, gift cards and free t-shirts. Street Smart NJ public awareness efforts are often conducted in conjunction with this increased enforcement.



Results

Evaluations of previous Street Smart NJ campaigns have shown positive results. There was a 28 percent reduction in pedestrians jaywalking or crossing against the signal and a 40 percent reduction in drivers failing to yield to crossing pedestrians or cyclists following campaigns the NJTPA managed in March 2016.

B. Potential Funding Resources

This appendix provides a list of common 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. Links to two online databases with additional funding sources has also been included. Grants listed are highly competitive and grant application requirements should be carefully reviewed before making the decision to apply. From the reviewers' perspective, application review is time-consuming and often applications will not be reviewed if all the required elements are not received by the published deadline. The most successful applications tell the story of the populations most in need of the proposed improvements, especially disadvantaged communities or vulnerable groups such as seniors. Applications should use compelling pictures, data and other documentation, and indicate how and why improvements are prioritized.

New Jersey Department of Transportation

The Division of Local Aid and Economic Development at the New Jersey Department of Transportation (NJDOT) provides funds to local public agencies such as municipal governments for construction projects to improve the state's transportation system. The state's Transportation Trust Fund and the federal Safe, Accountable, Flexible, Efficient Transportation Equity Act — A Legacy for Users (SAFETEA-LU) legislation provides the opportunity for funding assistance to local governments for road, bridge and other transportation projects. NJDOT and the three metropolitan planning organizations that cover the state administer federal aid programs. 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 municipalities in New Jersey 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://www.state.nj.us/transportation/business/localaid/municipalaid.shtm>

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://www.state.nj.us/transportation/business/localaid/countyaid.shtm>

Bikeways: This program funds bicycle projects that create new bike path mileage, working towards NJDOT's goal of 1,000 miles of dedicated bikeways in New Jersey. Special consideration will be given to bikeways physically separated from vehicle traffic, but on-road bike lanes or other bike routes are also eligible for funding. Learn more here: <https://www.state.nj.us/transportation/business/localaid/bikewaysf.shtm>

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, in order to promote increased usage of transit by all segments of the population and decrease private vehicle use. Learn more here: <https://www.state.nj.us/transportation/business/localaid/safe.shtm>

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 Commissioner of Transportation and the inter-agency Transit Village Task Force in order to be eligible to apply. Learn more here: <https://www.state.nj.us/transportation/business/localaid/transitvillagef.shtm>

Other NJDOT Assistance

Bicycle and Pedestrian Planning Assistance: NJDOT offers Local Technical Assistance (LTA) funding through the Office of Bicycle and Pedestrian Programs. Under this program, on-call consultants are paired with communities to complete a variety of projects including bicycle and pedestrian circulation and master plan studies, safety assessments, trail feasibility studies, bikeway plans, and improvement plans for traffic calming projects. For more information, please contact the state bicycle and pedestrian program coordinator at bikeped@dot.nj.gov

Federal Aid Infrastructure Grant Programs

Safe Routes to School: The Safe Routes to School Program provides federal funds for infrastructure projects that enable and encourage children in grades K-8, 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 Street Policy and Transit Village designation. Learn more here: <https://www.state.nj.us/transportation/business/localaid/srts.shtm>

Transportation Alternatives Program: The Transportation Alternatives Program 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 and are a designated Transit Village. Learn more here: <https://www.state.nj.us/transportation/business/localaid/alternatives.shtm>

New Jersey Department of Environmental Protection: The Recreational Trails 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. Learn more here: <https://www.nj.gov/dep/greenacres/trails/index.html>

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 here: <http://www.sustainablejersey.com/>

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.sustainablejersneyschools.com>

New Jersey Healthy Communities Network: The New Jersey Healthy Communities Network is a partnership of grantees, funders and advocate organizations who seek to have collective impact on community well-being to support healthy eating and active living. The Community Grant Program provides opportunities to develop healthy environments for people to live, work, learn and play by funding policies, projects and programs that support walking and bicycling. Learn more here: <https://www.njhcn.org/>

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:

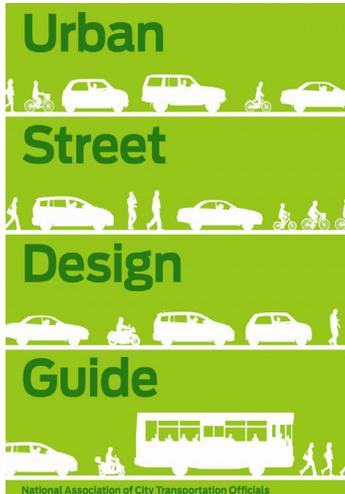
Sustainable Jersey Grants Portal: <http://www.sustainablejersey.com/grants-resources/grants-portal/>

Together North Jersey Funding and Resources Database: https://togethernorthjersey.com/?page_id=25162

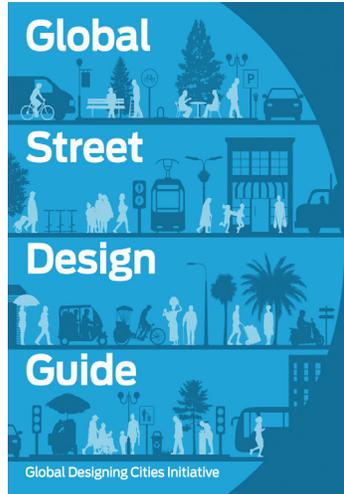
Federal Funding
1. US Department of Transportation (USDOT)
a. Better Utilizing Investments to Leverage Development (BUILD, replaced TIGER)
2. Federal Highway Administration (FHWA) Programs
a. Congestion Mitigation and Air Quality Improvement (CMAQ)
b. Surface Transportation Program (STP)
c. Highway Safety Improvement Program (HSIP)
d. National Highway Performance Program (NHPP)
e. Transportation Alternatives Program (TAP)
f. Safe Routes to School (SRTS)
g. Local Safety / High Risk Rural Roads Program (HRRR)
h. National Highway System (NHS)
i. Recreational Trails Program - Including hiking, bicycling, in-line skating, equestrian use, cross-country skiing, snowmobiling, off-road motorcycling, all-terrain vehicle riding, four-wheel driving, or using other off-road motorized vehicles.
j. Federal Lands Access Program (FLAP) - The Access Program supplements State and local resources for public roads, transit systems, and other transportation facilities, with an emphasis on high-use recreation sites and economic generators.
k. Emergency Relief - Repair or reconstruction after national disaster, can include bicycle and pedestrian facilities
3. National Highway Traffic Safety Association
a. NHTSA Section 402 State Highway Safety Program
b. NHTSA Section 405 Non-Motorized Safety Grants
4. Federal Transit Administration Programs
a. Urbanized Area Formula Program (UZA) - Public transit and bike routes to transit
b. Fixed Guideway Capital Investment Grants - Transit systems and bike parking
c. Bus and Bus Facilities Formula Grants - Includes bike parking facilities
d. Enhanced Mobility of Seniors and Individuals with Disabilities - Access to transit facilities for seniors
State Funding
5. Municipal Aid (\$140m)
6. County Aid (\$150m)
7. Local Bridges (\$44m)
8. Safe Streets to Transit (\$1m)
9. Transit Village (\$1m)
10. Bikeways (\$1m)
11. Local Aid Infrastructure Fund (\$7.5m)
12. Safe Corridors Highway Safety Funds
13. Urban Aid (\$10m)
14. New Jersey Trails Program (Department of Environmental Protection)
15. Other Funding Sources
16. Regional/Local CMAQ Initiatives Program (NJTPA)
17. NJ Division of Highway Traffic Safety
18. Open Space & Farmland Preservation
19. Homeland Security Transit Security Grant Program (TSGP)
Other Sources
20. County Capital Program
21. Municipal Capital Programs
22. Foundations

C. Design Resources

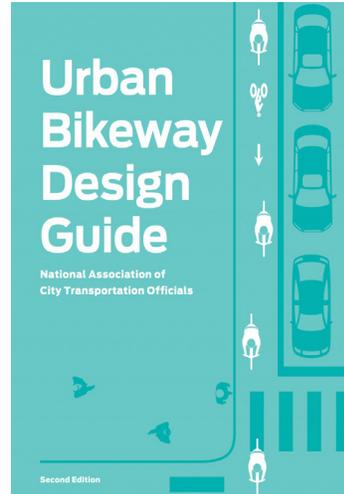
NACTO Guides



[Urban Street Design Guide](#)



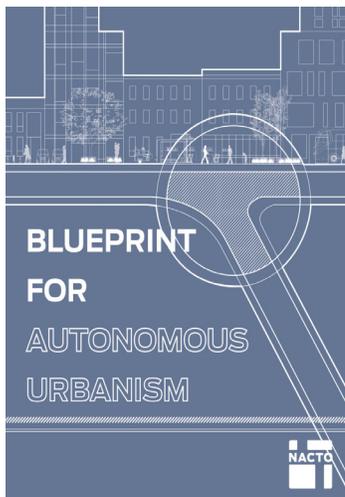
[Global Street Design Guide](#)



[Urban Bikeway Design Guide](#)



[Transit Street Design Guide](#)



[Blueprint for Autonomous Urbanism](#)

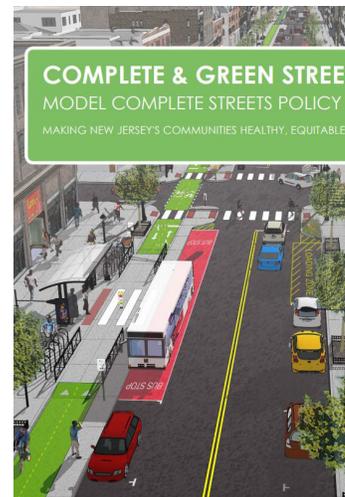


[Urban Street Stormwater Guide](#)

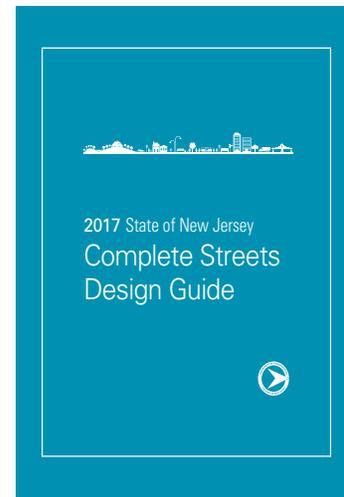


[Bike Share Station Siting Guide](#)

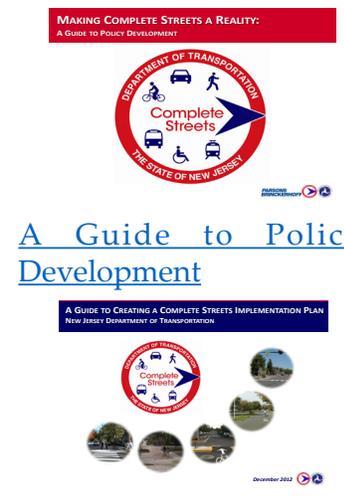
NJDOT Guides



[Complete & Green Streets for All: Model Policy and Guide](#)

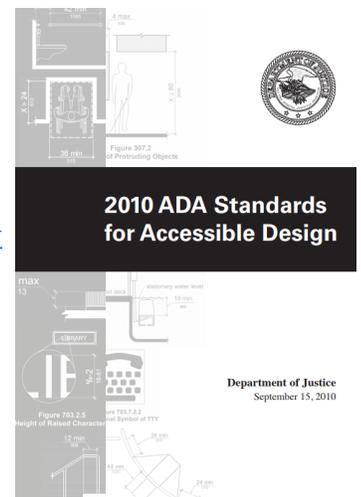


[2017 State of New Jersey Complete Streets Design Guide](#)



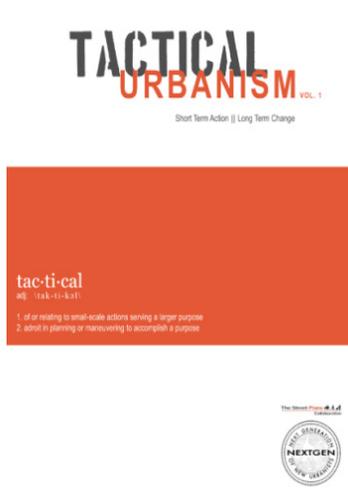
[A Guide to Policy Development](#)

ADA Guidelines

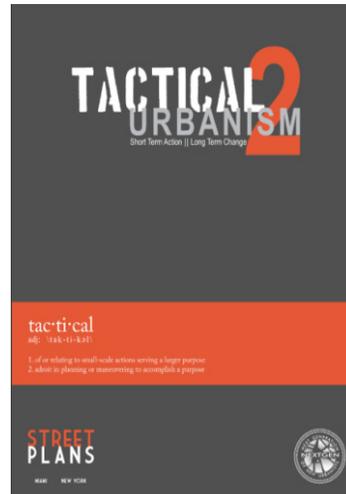


[2010 ADA Standards for Accessible Design](#)

Tactical Urbanism Guides



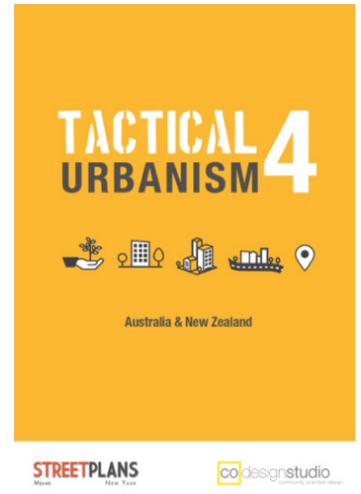
[Tactical Urbanism 1](#)



[Tactical Urbanism 2](#)



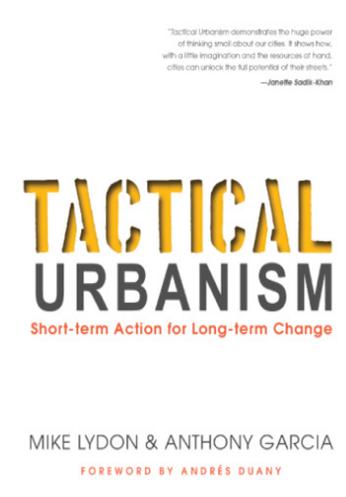
[Tactical Urbanism 3](#)



[Tactical Urbanism 4](#)



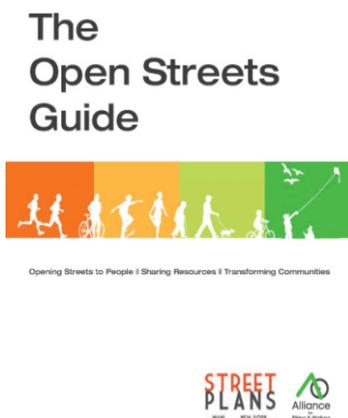
[Tactical Urbanism 5](#)



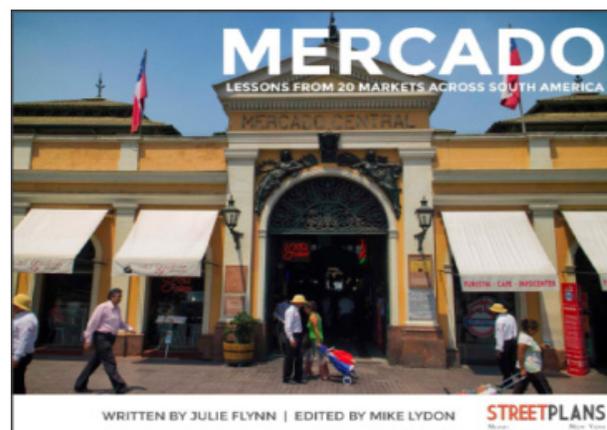
[Tactical Urbanism](#)



[Tactical Urbanist's Guide to Materials and Design Version 1.0](#)



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