



Complete Streets Conceptualization Report for Post Office Plaza Township of Cranford, Union 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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Table of Contents

Executive Summary	1
Background	2
What is a “Complete Street?”	3
Benefits of Complete Streets	4
Study Area	7
Assessment of Need.....	8
Data	10
Concepts	11
Inspiration	21
Recommendations and Next Steps	22
Conclusion	25
Appendices	27

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

In 2018, the Township of Cranford and the Cranford Downtown Management Corporation (DMC) sought the expertise of the North Jersey Transportation Planning Authority (NJTPA)'s Complete Streets Technical Assistance (CSTA) Program to help redesign, reimagine, and reinvigorate Post Office Plaza. This report identifies four ways to expand and improve the plaza. Two preferred concepts were selected from the four proposals. Feedback from municipal stakeholders was used to develop two conceptualizations. The first shows how the plaza could look by closing Eastman Street and extended the pedestrian space into the former roadway. The second conceptualization shows how two plazas could be created by closing both Eastman Street and Miln Street and creating a new street in the middle (Figure 1).

The conceptualizations included in this report will help to build support for an enlarged and improved Post Office Plaza. Additionally, this report describes how Cranford could test out a plaza expansion by conducting a demonstration project to gather additional feedback. The concepts and reference images provide context to how a temporary project could be completed. The appendix provides additional resources on short-term implementation strategies.

While the conceptualizations focus on Post Office Plaza, the idea of expanded public space can be applied to other municipal-owned roads in Cranford. A key factor in making public plazas a success is creating a safe environment for people walking and biking in the area. In 2017, the Cranford partnered with EZ Ride transportation management association to implement the NJTPA's pedestrian safety program, Street Smart NJ. The township may want to consider hosting Street Smart NJ campaigns annually to remind residents and visitors of the state's pedestrian safety-related laws and what they can do to make Cranford roads safer for everyone. Additional Street Smart NJ campaign information, along with a list of potential funding resources, can also be found in the appendices.



Figure 1. Conceptualization showing how Post Office Plaza could look if expanded onto Eastman Street.

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.

The Township of Cranford was among the nine communities selected to receive technical assistance. Downtown Cranford is a highly walkable area with high quality pedestrian infrastructure and strong pedestrian connections to a NJ TRANSIT rail station. The downtown is home to Post Office Plaza, which serves as a place for community events. Post Office Plaza is a small public space bordered by Eastman Street, Miln Street, and North Avenue (NJ State Route 28). In its application to the CSTA Program, Cranford Township expressed interest in conceptual plans for complete streets improvements on Eastman Street and Miln Street (Figure 2). The municipality has in the past closed off those street segments for community events. The area around the plaza contains dining, retail, and entertainment venues in addition to the U.S. Postal Office. The plaza contains a small fountain, an important flagpole monument, and some public seating. The plaza was recently improved with refreshed landscaping and additional seating. The township wishes to enhance the area as a site for public events by making design improvements to both the plaza and the two bordering street segments. The goal of this project was to provide the Cranford Downtown Management Corporation (DMC) and other key stakeholders with design concepts for the plaza and adjoining municipal streets to support public use and safety.

In December 2018, the CSTA project team met with municipal officials and DMC representatives to determine the assistance required for designing improvements to the segments of Eastman Street and Miln Street that run along Post Office Plaza and terminate at North Avenue. The project team and municipal officials determined that an effective approach would consist of preparing four conceptual design alternatives for the target streets for stakeholders to consider.

The project team returned to Cranford on February 22, 2019 to present the four design concepts to stakeholders. During the meeting, the team explained the concepts and discussed the pros and cons of each option. The project team gathered feedback from attendees and the stakeholders selected two of the plans for further development.

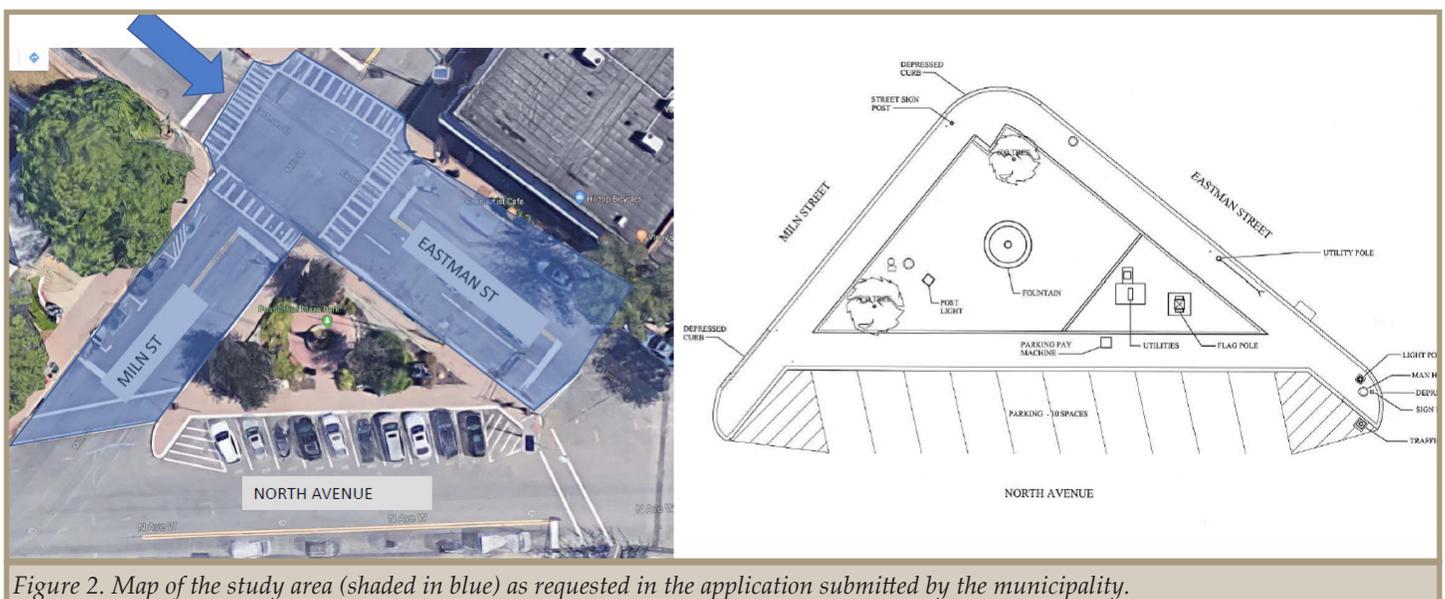


Figure 2. Map of the study area (shaded in blue) as requested in the application submitted by the municipality.

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.

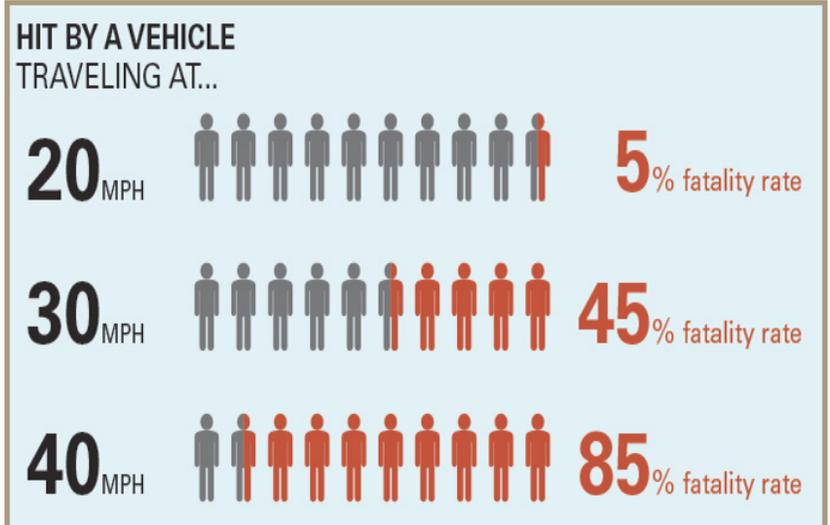


Figure 4. Graphic showing increased fatality rate as vehicle speeds increase.

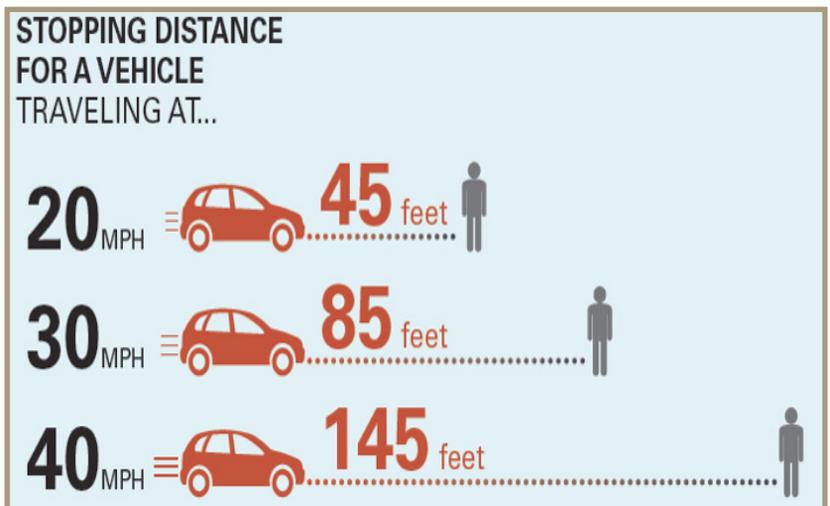


Figure 5. Graphic showing increased stopping distance as vehicle speeds increase.

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 Cranford

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.

The Township of Cranford has adopted a complete streets policy. Union County has not. Cranford has yet to pursue implementation of its complete streets policy, and has identified state and county jurisdiction over several roads in the municipality as a challenge to implementation.

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

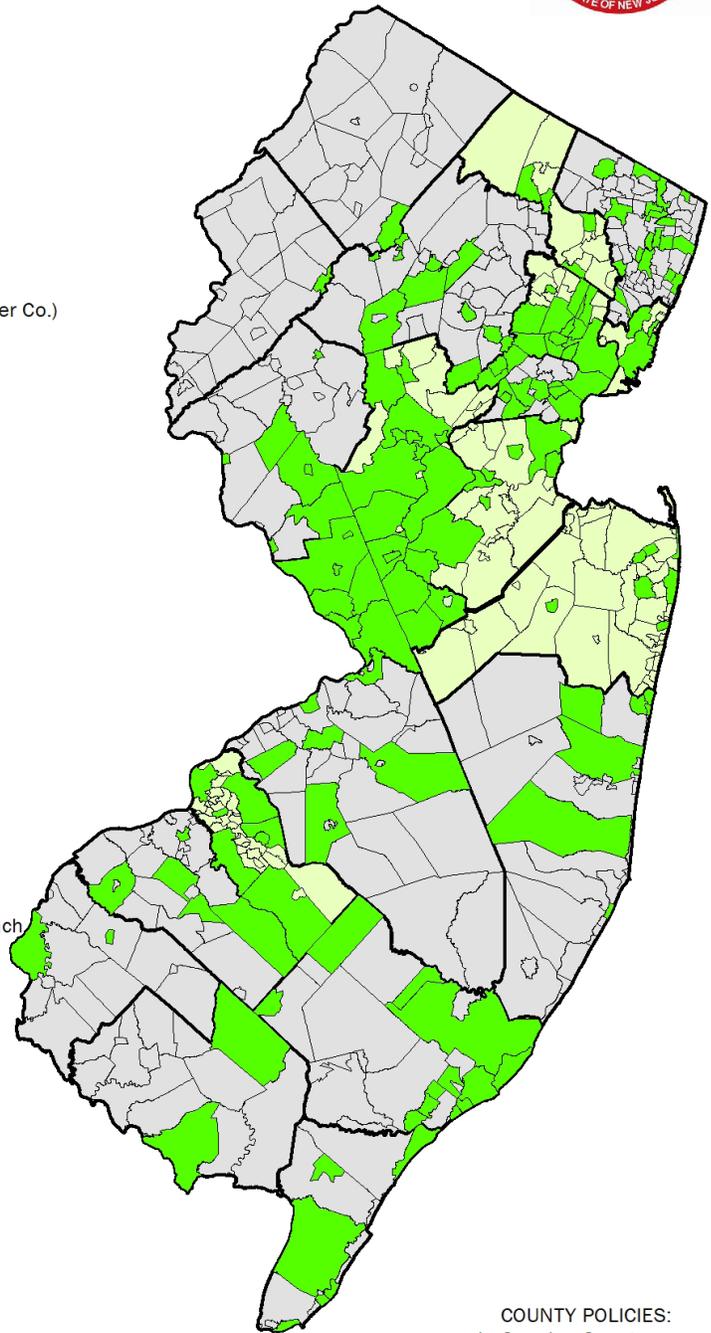
3. New Jersey Bicycle and Pedestrian Resource Center, "NJ Complete Streets Policy Atlas," 2018. <http://njbikeped.org/complete-streets-2/>.

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. Twnshp of Franklin (Hunterdon)
40. Twnshp 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

- 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

Cranford Township is home to approximately 23,972 residents and occupies an area of 4.8 square miles. The median age is 42.9, and 53 percent of residents have a college degree. The community enjoys a 78 percent homeownership rate, with an estimated median household income of \$107,052 (US Census Bureau, 2017).

The triangular Post Office Plaza is located in downtown Cranford, just a block from the New Jersey Transit rail station (Figure 12). Cranford's downtown street grid is divided on a diagonal by the railroad and North Avenue West (New Jersey State Route 28), which is what creates the triangular plaza. North Avenue is lined by businesses including a DigiPlex Movie Theater, which occupies a prime retail space directly across from the plaza. Miln Street borders the plaza's west side, and contains a large United States Postal Service office. Eastman Street creates the border on the east side and is home to an array of small local businesses, including Hilltop Bicycles, Barons Drug Store, Vinny's Pizza and Pasta, and Craven BBQ.

The NJ TRANSIT rail line serves as an asset and barrier to the community. The line is served by the Raritan Valley Line with direct trains into Newark and connecting service into New York City. Commuter parking is limited and in high demand around the station, creating congestion during peak hours. Additionally, the rail line limits the amount of roadways connecting the northern and southern parts of the township. The result is that heavy traffic is funneled to the intersection of Union Avenue and North Avenue. When traffic backs up at that intersection, it impacts movement at the intersection of North Avenue and Eastman Street.

Cranford's downtown core is compact, with attractive residential neighborhoods on all sides. The interconnected street network with sidewalks allows residents to easily access the downtown area on foot or by bicycle. There are a variety of parks in Cranford, but no large park or plaza to serve as a central gathering space for residents. Instead, much of the space is used for commuter parking.

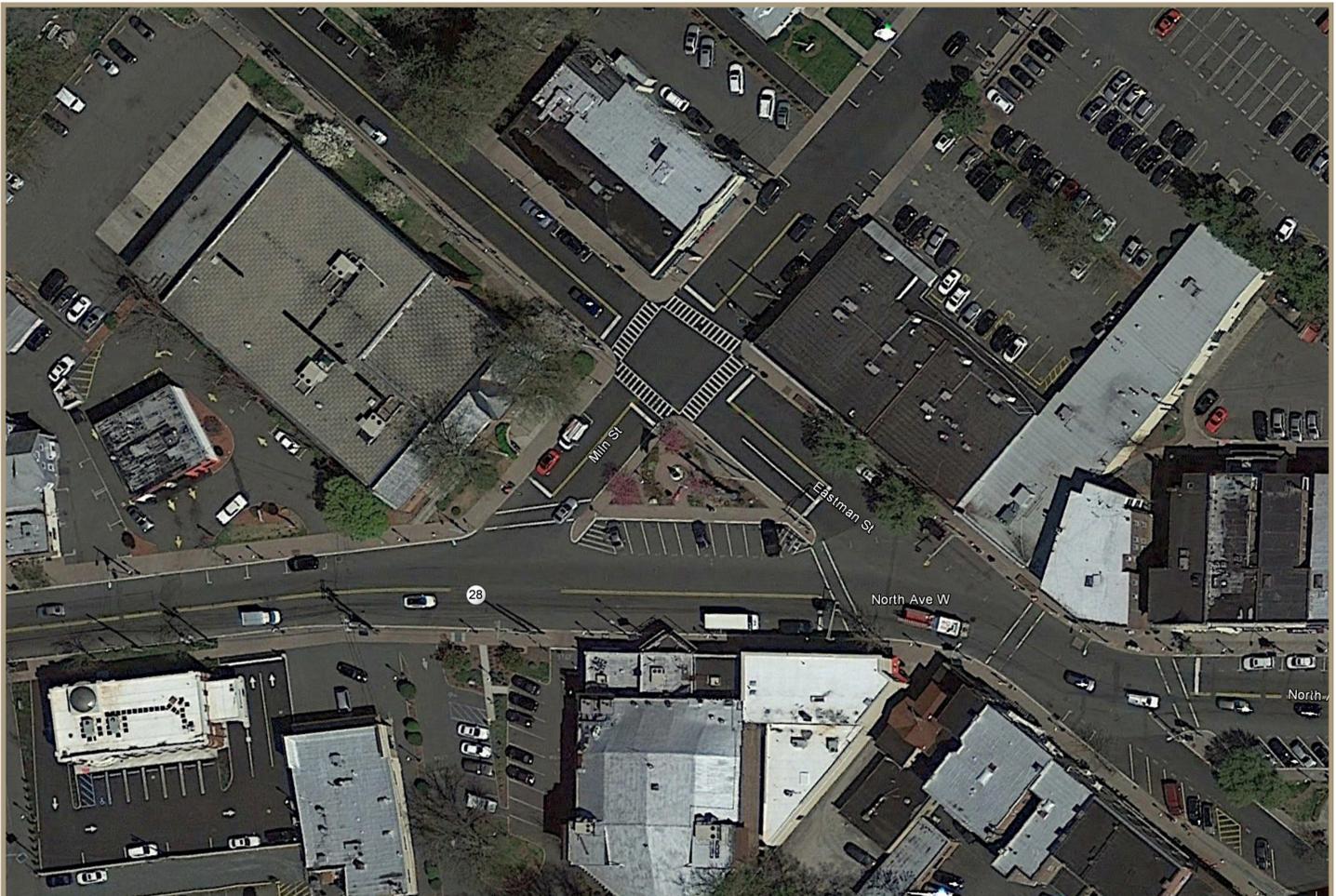


Figure 12. Aerial view of the study area. Post Office Plaza is in the center of the image.

There are 10 parking spaces located along the southern edge of the plaza on North Avenue. These spaces cut into the plaza, restricting its size (Figure 13). Parallel parking spaces on Eastman Street restrict sidewalk space, blocking off the location of a potential crosswalk.

The plaza is located in Cranford's Special Improvement District, which is managed by the DMC. The DMC is highly interested in promoting Cranford as a destination, and hosts events throughout the year in and around Post Office Plaza. As space within the plaza is so constrained, additional space is secured by temporarily closing Eastman and/or Miln Streets (Figure 14). These temporary closures do require extensive police work in order to block traffic, as the road does not have any built-in features to facilitate the process.

In 2018, the DMC refreshed the landscaping and added seating to Post Office Plaza. In partnership with the Flag Pole Committee, they have raised funds for additional improvements (Figure 15). While these improvements have beautified the plaza, they are intended to be temporary as a full redevelopment of the plaza is under study.

Assessment of Need

In 2017, the DMC adopted a strategic plan for the downtown area. During the planning process, the community prioritized the goals of creating a cultural arts committee to champion arts installations and cultural programming, and to identify opportunities for creating new public spaces. The Township hopes that complete streets improvements around the plaza will further these objectives. Cranford would like to redesign Eastman and Miln Streets to enhance their function as a site for community events. The streets currently serve to move vehicular traffic through the downtown except when temporarily closed off for events.

Surrounding Roads

North Avenue West (NJ Route 28) is classified as an urban principal arterial with a posted speed limit of 25 mph in the downtown area. There are 10 paid on-street parking spaces abutting the plaza on North Avenue. Drivers access these spaces by pulling in, and can enter the spaces from both directions. The design of these spaces has resulted in a history of crashes, as drivers must back out onto the state road to exit (Figure 21). According to a 2005 Cranford Downtown Parking and Circulation Study, peak utilization rates for the parking spaces during weekdays and the weekend are over 90 percent. There is congestion along North Avenue near the plaza, due in part to the density of intersections in the immediate and surrounding area.



Figure 13. Parking spaces in front of Post Office Plaza.



Figure 14. Yoga on Eastman Street.



Figure 15. New movable seating in the plaza.



Figure 16. Wide intersection at Eastman St. and North Ave.

The intersection of Eastman Street and North Avenue is controlled by a traffic signal. The skewed angle in which the streets meet makes the intersection very long — southbound vehicles turning left from Eastman Street onto the North Avenue eastbound lane must traverse 230 feet (Figure 16). After making this turn onto North Avenue, the next signalized intersection (at Union Avenue) is only 150 feet to the east. The result is limited throughput for Eastman Street traffic. Additionally, North Avenue curves to the south at the Eastman Street intersection, which causes some confusion with the signal placement.

The intersection of Miln Street and North Avenue is controlled by a stop sign on Miln St. Due to the nearby presence of Eastman Street, most traffic using Miln Street is likely turning right onto North Avenue. The skewed angle at which the roadways intersect invites vehicles to make this turn without coming to a complete stop. Miln and Eastman streets meet at a standard four-way stop (Figure 17).

The surrounding area boasts a strong pedestrian realm with wide sidewalks, pedestrian-scale lighting, landscaping, and pedestrian- and transit-supportive land uses. Despite past improvements to the plaza, it functions as a traffic island integrated into the pedestrian network through crosswalks at all three corners. However, there is no crosswalk across North Avenue from the southwest corner of the plaza and no crosswalk across Eastman Street from the southeast corner (Figure 18). Plaza sidewalk ramps do not comply with the Americans with Disabilities Act (ADA) and the traffic signal to cross North Avenue from the plaza does not have pedestrian signals (Figure 19). There is a crosswalk diagonally across North Avenue in the middle of the intersection with Eastman Avenue (Figure 20). Due to its location, it is push-button activated and all directions of traffic receive a red light when pedestrians can cross.



Figure 17. Intersection of Miln Street and Eastman Street, looking south.



Figure 18. Missing crosswalk from the plaza to the businesses across Eastman Street (looking north).



Figure 19. Crosswalk on southeast corner of plaza is not ADA-compliant and lacks pedestrian signals (looking south).



Figure 20. Crosswalk in the center of Eastman Street and North Avenue intersection. Looking east.

Data

Traffic

North Avenue had annual average daily traffic (AADT) of 14,014 vehicles in 2017 according to the most recent data available from the New Jersey Department of Transportation. Traffic data is not available for the municipal roads.

Crash History

Over the five-year period from 2014-2018, there were two crashes involving pedestrians along the street segments surrounding Post Office Plaza. Both occurred on Eastman Street, with one occurring at the intersection of Eastman Street and Miln Street. There was one crash involving a bicyclist during the same period, also on Eastman Street, but on the south side of North Avenue. During the same period, there were 29 vehicular crashes, including four that involved vehicles backing out of the parking spaces abutting the southern edge of the plaza on North Avenue (Figure 21).

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

Location	Date	Time	Crash Type	Pedestrian Age	Pedestrian Gender	Severity	Intersection	Lighting
Eastman Street and Miln Street	3/28/2017	18:40	Pedestrian	23	N/A	Injury	Yes	Daylight
Eastman Street and North Avenue West	11/28/2015	11:17	Pedestrian	66	Female	Serious Injury	No	Daylight
Eastman Street and North Avenue West	6/21/2016	7:42	Pedalcyclist	59	Male	No Apparent Injury	No	Dusk

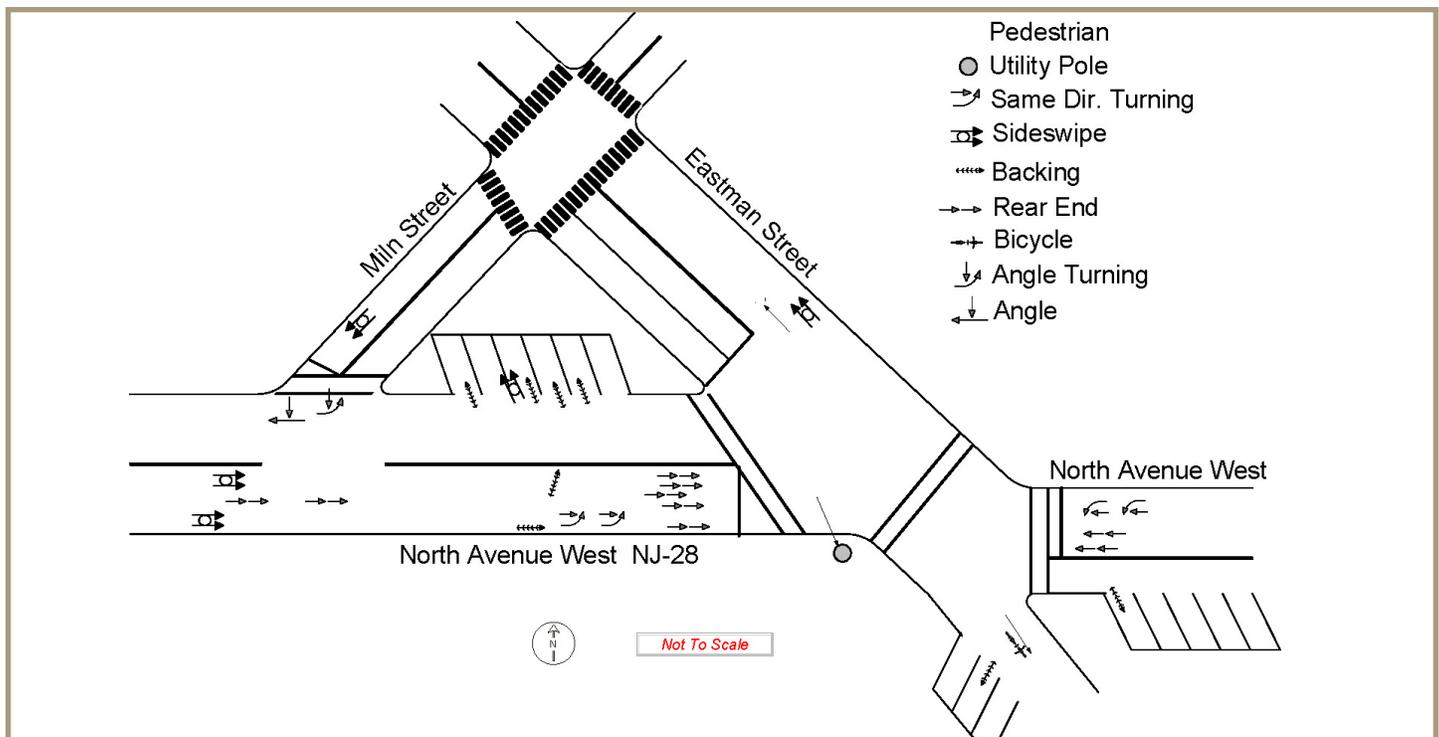


Figure 21. Cranford Police Department Crash Data, 2014-2018.

Concepts

Four initial designs were developed for Cranford. As requested by the municipal stakeholders, these designs were intended to improve pedestrian safety, increase public access to the plaza, expand public open space, create new space for art, support events, and support local business. To accomplish these goals, all the plans expanded the plaza, added pedestrian connectivity, and addressed traffic concerns on North Avenue. All of the concepts require coordination with NJDOT, which has jurisdiction over changes to intersections with state roads. There are many ways in which parks can be configured, and the concept images are only intended to provide a few examples of some of the design features that can be incorporated into the final design. Page 21 shows photos of similar urban parks where inspiration was drawn from.

Concept 1: Minor Expansion

The first concept was developed to show how the plaza could be improved without major modifications to the area (Figure 22). The largest change in this proposal comes from the removal of the parking spaces located along North Avenue, on the southern edge of the plaza. Removing the parking adds space to the plaza and simplifies traffic movements on North Avenue, decreasing crash incidents. Additionally, parking along Eastman Street is reconfigured to allow the construction of a new crosswalk with ADA-compliant ramps. This concept enlarges the plaza from 3,700 square feet to 5,680 square feet, and results in the removal of 11 parking spaces, although three new parallel parking spots on North Avenue may be possible. Larger events would still require the temporary closure of Eastman Street and/or Miln Street. This concept can be accomplished with minor changes to the existing traffic signal, which allows for a lower cost.

Municipal officials and stakeholders said they appreciated the new pedestrian connections, but would prefer to see a bolder plan for the community. As such, this design was not developed further.

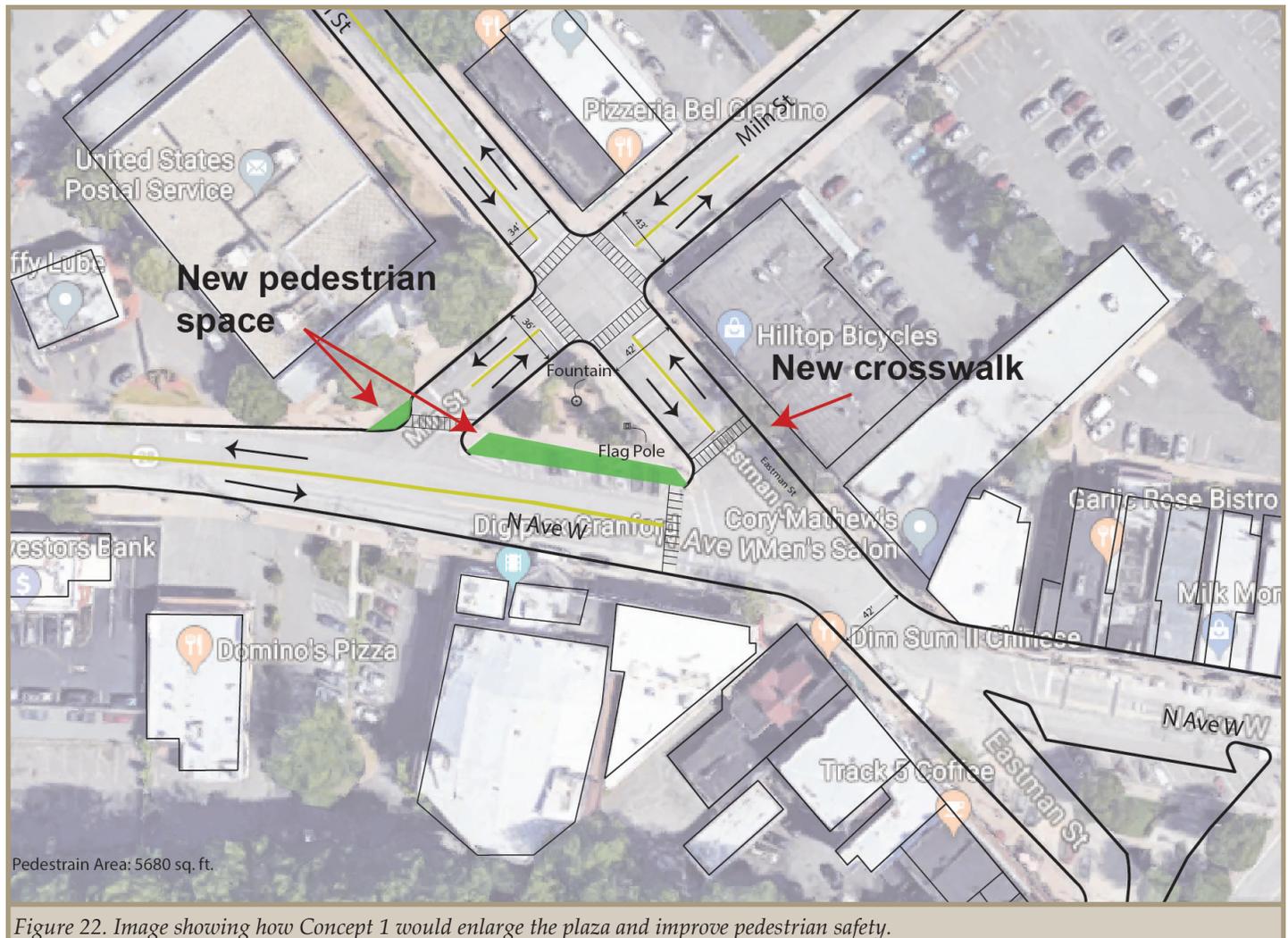


Figure 22. Image showing how Concept 1 would enlarge the plaza and improve pedestrian safety.

Concept 2: Close Miln Street

The second concept is to permanently close part of Miln Street and use that space to expand the plaza (Figure 23). This proposal also removes the parking along North Avenue and adds new pedestrian accommodations. This concept enlarges the plaza from 3,700 square feet to 8,280 square feet, and results in the removal of 11 parking spaces. However, it might be feasible to add up to eight parallel parking spots along North Avenue.

Traffic currently using Miln Street would be diverted to Eastman Street. In this proposal, larger vehicles turning right from Eastman Street to North Avenue would have difficulty making the turn with the current placement of the traffic signal and street light. In particular, trucks serving the nearby Post Office could be adversely impacted. Accommodating these turns would raise the cost of the project, as it would require that the signal and street light be relocated. All other turns would function normally.

The new space on Miln Street could be developed as a park or plaza space. The space would be able to accommodate events, and would no longer require street closures, facilitating event planning.

Stakeholders raised some concerns with this proposal. One concern was that customers of the Post Office, particularly the elderly, will have to walk further from their car to access the building. The second concern is the impact on trucks trying to turn. The final concern was that the new plaza space would be located away from the businesses. Aside from providing less of a direct benefit to them, the businesses maintain longer hours than the Post Office, and thus are better positioned to monitor the plaza. Due to these concerns, this design was not developed further.

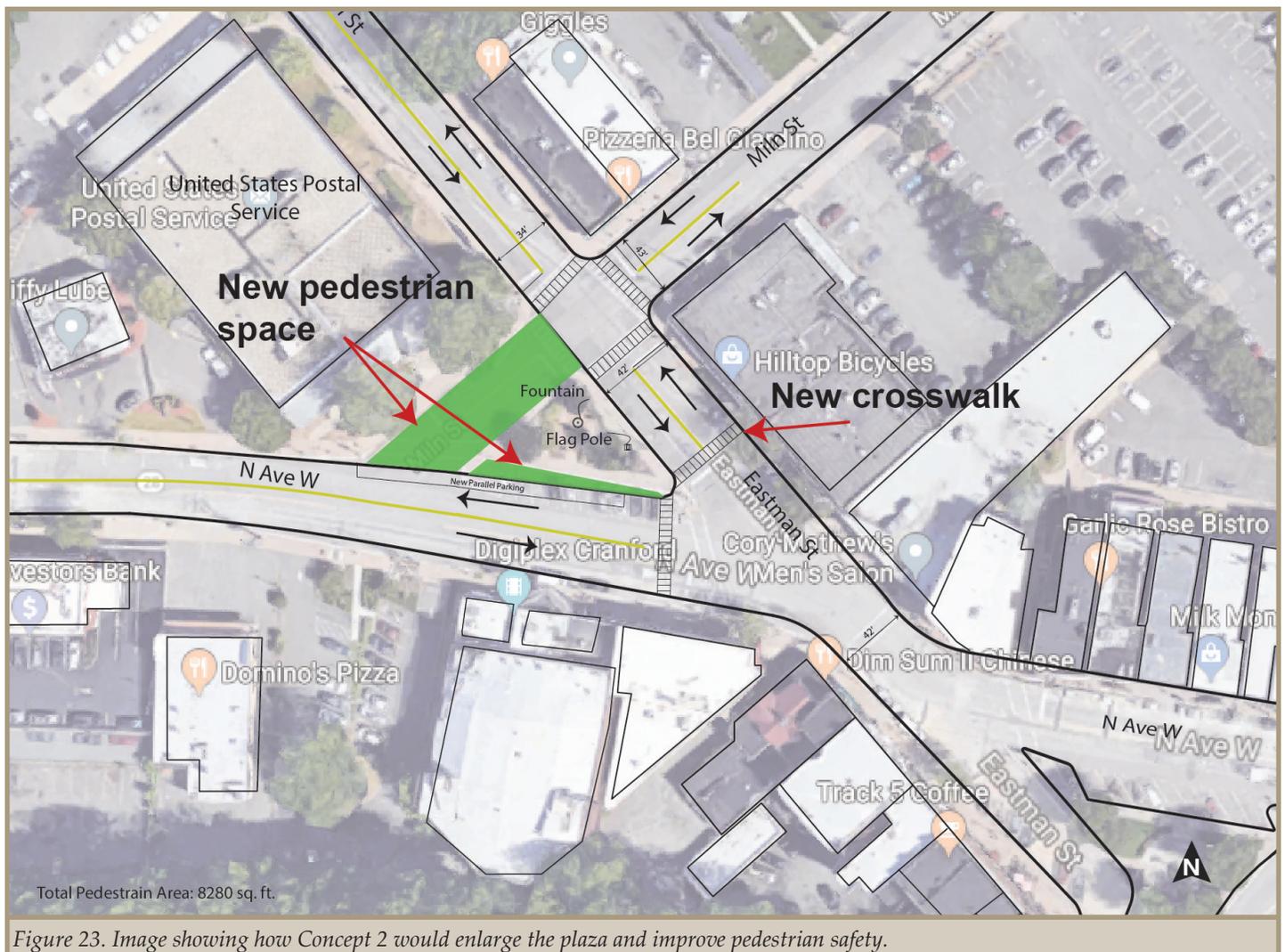


Figure 23. Image showing how Concept 2 would enlarge the plaza and improve pedestrian safety.

Concept 3: Close Eastman Street

The third concept creates new public space by permanently closing part of Eastman Street and using that space to expand the plaza (Figure 24). As with the previous proposals, this design also adds public space by removing the parking along North Avenue and adding new pedestrian accommodations. This concept enlarges the plaza from 3,700 square feet to 12,350 square feet, and results in the removal of 14 parking spaces. However, it might be feasible to add up to eight parallel parking spots along North Avenue.

Traffic currently using Eastman Street would be diverted to Miln Street. A traffic study will be needed to determine whether this concept should be advanced, and should be done in coordination with NJDOT, which has jurisdiction over changes to intersections with state roads. The traffic study should evaluate if a traditional traffic signal or a High-Intensity Activated Crosswalk signal is needed at the intersection for safe bicycle and pedestrian crossing of North Avenue. While the installation of any new traffic signal would add to the cost of the concept, the current signal at Eastman Street is out of date and should be replaced.

The new public space on Eastman Street could be developed as a park or plaza that could accommodate events. This new space would eliminate the need for temporary street closures. The businesses along Eastman would benefit greatly from the space, as it creates opportunity for outdoor seating and extended merchandise displays.

At the public meeting, many stakeholders selected this option as their preferred alternative. Attractive features of this concept include the preservation of the existing plaza amenities, maintaining convenient street parking to the post office, and simplifying traffic patterns on North Avenue. This concept can also be tested using low-cost materials (see recommendations and next steps).

Stakeholders raised some concerns with this proposal. The first draft proposed a new mid-block crosswalk directly linking the cinema building located on the south side of North Avenue to the plaza. The municipality requested that this crosswalk be relocated to the corner. Questions about traffic flow were also raised, but it was clarified that a traffic study will likely be needed. Figures 25 through 29 show different views of the proposed plaza.

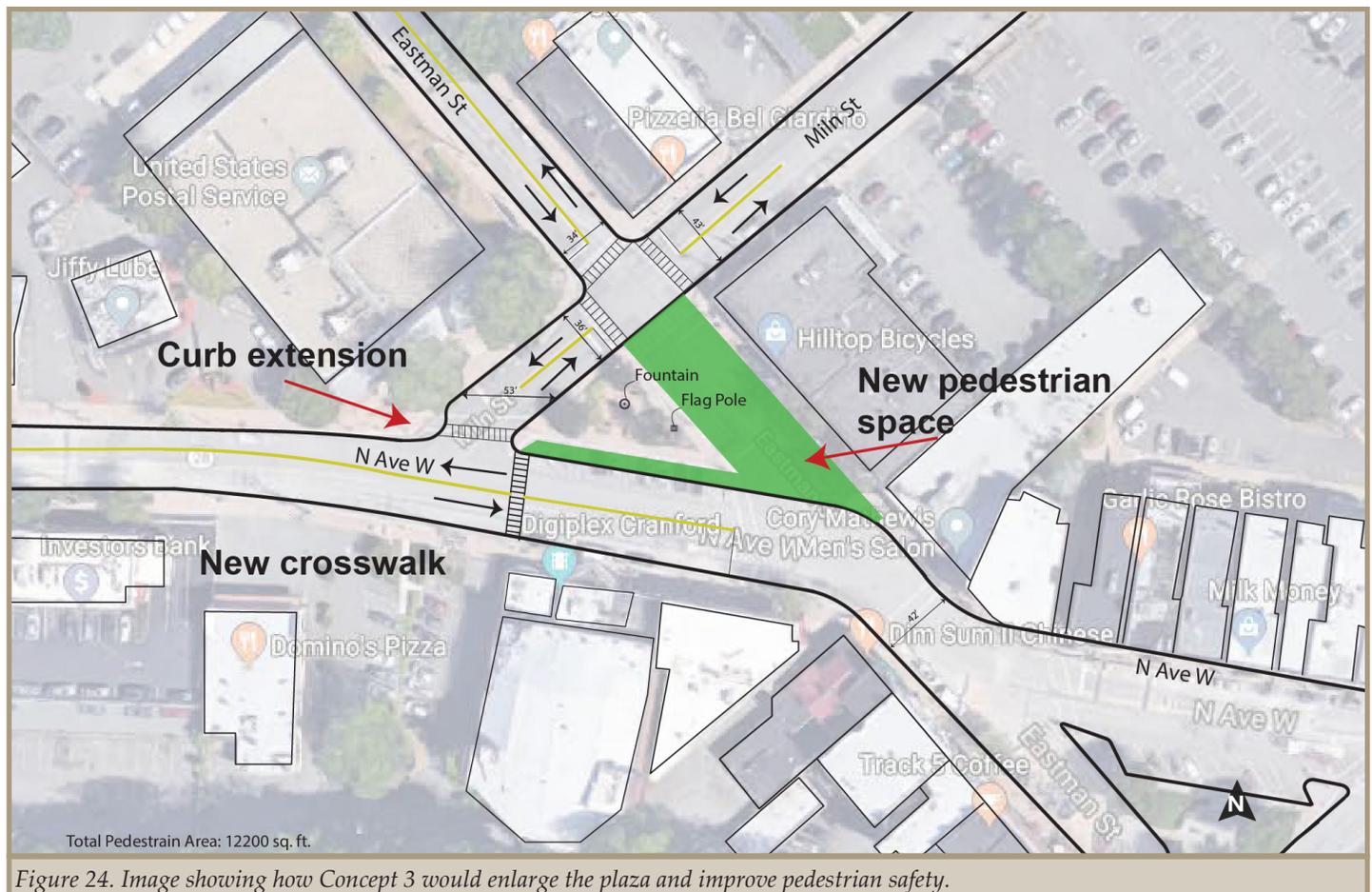


Figure 24. Image showing how Concept 3 would enlarge the plaza and improve pedestrian safety.



Figure 25. Concept 3, looking northwest. The brick pattern area is the new plaza space created by closing Eastman Street.



Figure 26. Concept 3, looking northeast. Removing the pull-in parking allows for a wider sidewalk and new green infrastructure along North Avenue. The existing plaza can be maintained as it currently exists.



Figure 27. Concept 3, looking southeast from the post office. The new public space provides a stronger pedestrian environment and supports local businesses. Movable seating in the plaza allows for events to use the space as needed.



Figure 28. Concept 3, looking west. Chairs and seating can be used to create a new lunch and dinner time destination for residents and visitors. Post Office Plaza can be transformed from a traffic island to a public square.



Figure 29. Cranford and the DMC should engage with the public to decide on how to best allocate space within the new plaza. Concrete or brick paving allows flexibility in placing furniture and hosting events like a farmer's market. However, grass and trees can create a more visually appealing space.

Concept 4: Complete Realignment

The fourth concept completely re-imagines the study area by permanently closing both Eastman and Miln streets and creates a new road in the middle of the current plaza. It creates the most public space of the four concepts and eases traffic movement by creating a standard 90-degree intersection with North Avenue. In addition, this concept creates two plazas which can each feature unique designs to cater to most needs. (Figure 30). This concept removes the majority of the existing plaza amenities, but maintains the flag monument at its current location.

The conceptual images show an example of how these two areas could look. The new public space in front of the Post Office becomes a passive park — similar to how Post Office Plaza works today. The design of the park space is inspired by the large trees in front of the building and the civic nature of the building. In this example, the new park space is shielded by new trees, has ample seating, and features a relocated or rebuilt fountain. The design brings greenery into the downtown area and creates a space for quiet rest. It is inspired by urban parks such as the Morristown Green (see Figure 37).

Across the new street, the majority of the second public space is built like an open plaza, intended for active uses. This allows the space to serve varying purposes depending on the needs of the time or day. For example, local businesses could place chairs and tables so their customers can have lunch outside. The space can be programmed with events such as farmers' markets, community yoga, local music or other events as needed. The design is inspired by urban plazas and pedestrian malls such as the Division Street pedestrian mall in Somerville and the new Metuchen Town Plaza, which the borough advertises as a space where “artists, musicians, makers and the community come together” (see Figure 38 and Figure 40). The eastern space is also home to an important flag pole memorial. Currently, the flag pole is located in the corner of the plaza, and is visually obscured by the traffic signal and electrical utility boxes. In the proposed design, the flag is the focal point of a permanent seating area.

While the two plazas are separated by a road, they can be unified through the use of flush paving, which is when the sidewalk and road are at the same grade (Figure 41). Separating the roadway and the public space with bollards instead of curbs visually ties the two spaces together. Removable bollards can be installed in the roadbed at the two ends of the new street. When events need even more space, the street can be closed to vehicles by installing the bollards so that the two plazas become one continuous space.

The creation of a new standard intersection could improve traffic flow in a number of ways. Moving the traffic signal 80 feet to the west provides additional separation with the Union Avenue traffic signal, which backs up during peak hours. Reducing the number of intersections in the area from two to one also reduces the number of conflict points. The proposed intersection also occupies less space than the existing Eastman Street intersection, which allows for improvements in signal timing. The proposed design reduces crosswalk lengths considerably, which enhances pedestrian safety and also allows for shorter signal cycles. Finally, this is the only option that avoids an acute angle for turning vehicles.

A traffic study will be needed to determine whether this concept should be advanced, and should be done in coordination with NJDOT, which has jurisdiction over changes to intersections with state roads. One concern raised by stakeholders was traffic flow at the new three-way intersection with Miln Street, Eastman Street, and the new proposed road. Stakeholders were concerned that vehicles waiting at the North Avenue traffic signal would back up onto these roads. One suggestion to address this concern would be to make the new road one-way in the southbound direction, as this would create two lanes to hold traffic. Another suggestion was to make the new road one-way in the northbound direction, which would eliminate any queuing. A third option is to install a mountable mini modern roundabout at the three-way intersection as a traffic control device. A traffic study would show whether any of these measures are needed or feasible. The results of the traffic study would also show if the new roadway needs one or two lanes to function properly.

At the public meeting, many stakeholders selected this option as their preferred alternative. Some noted that a radical change could provide a significant boost to the town, and the two separate spaces would allow the municipality to satisfy the most users.

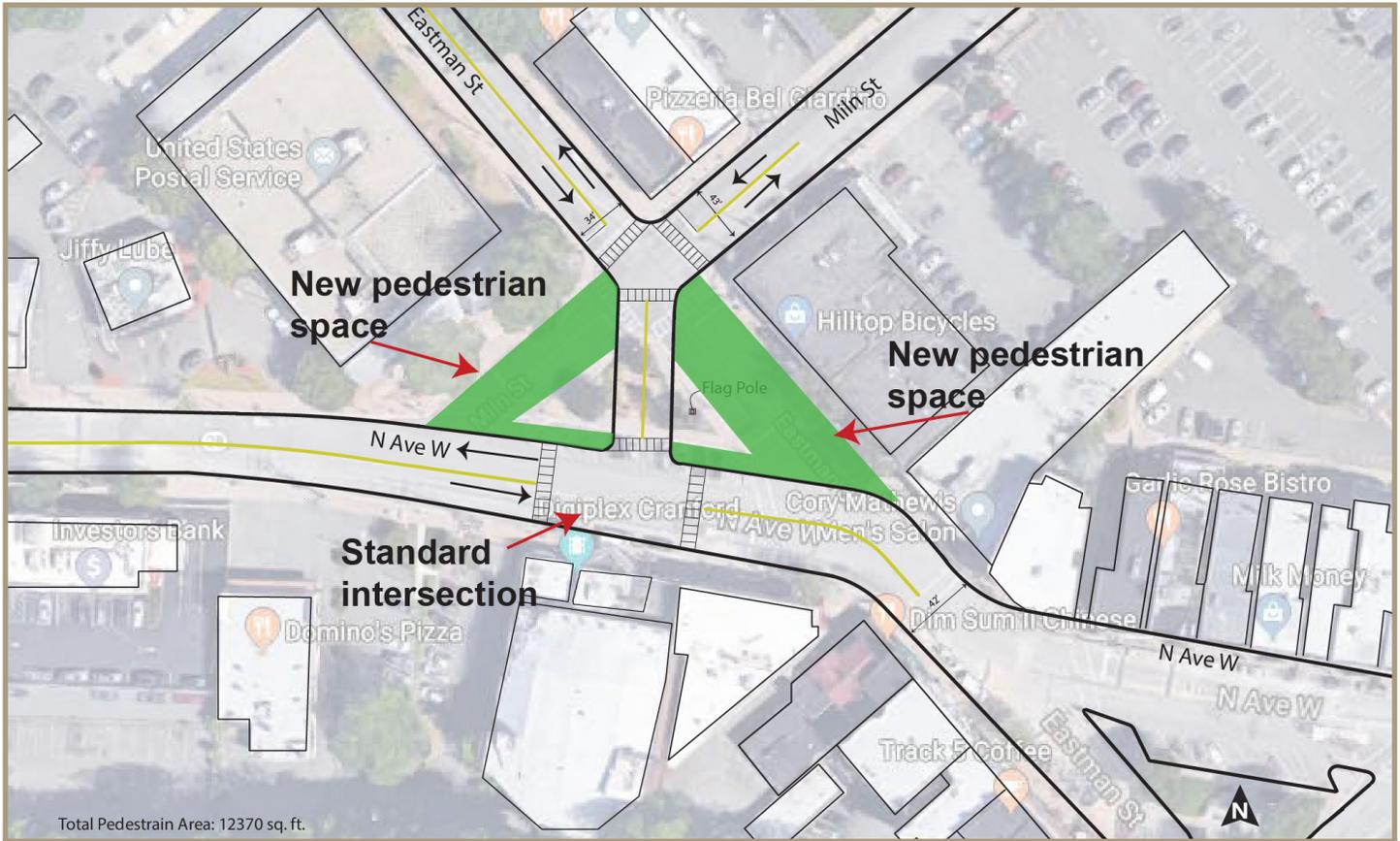


Figure 30. Image showing how Concept 4 creates two new spaces by realigning the roadway.



Figure 31. Overhead view of Concept 4. The difference between the passive park in front of the post office and the active plaza in front of the businesses is clearly visible.



Figure 32. Concept 3, looking southeast from the post office. The new public space provides a stronger pedestrian environment and supports local businesses. Movable seating in the plaza allows for events to use the space as needed.



Figure 33. Concept 3, looking west. Chairs and seating can be used to create a new lunch and dinner time destination for residents and visitors. Post Office Plaza can be transformed from a traffic island to a public square.



Figure 34. Concept 3, looking southeast from the post office. The new public space provides a stronger pedestrian environment and supports local businesses. Movable seating in the plaza allows for events to use the space as needed.



Figure 35. An alternative vision of the proposed park in front of the post office, with a sculpture instead of a fountain.

Inspiration

The concept designs were inspired by successful public spaces in New Jersey. Figures 36 to 41 are examples.



Figure 36. Spiotta Park, in South Orange, is a green oasis in a popular downtown. Its low retaining wall (not pictured) makes the park feel intimate, and creates a boundary enclosure for containing children while providing additional seating.



Figure 37. The Morristown Green incorporates monuments, fountains, and large trees in a mixed use space surrounded by thriving businesses.



Figure 38. Division Street, a pedestrian mall in Somerville, has been credited with revitalizing a retail corridor.



Figure 39. Monument Square, in New Brunswick,, celebrates history while providing a comfortable spot for rest downtown.

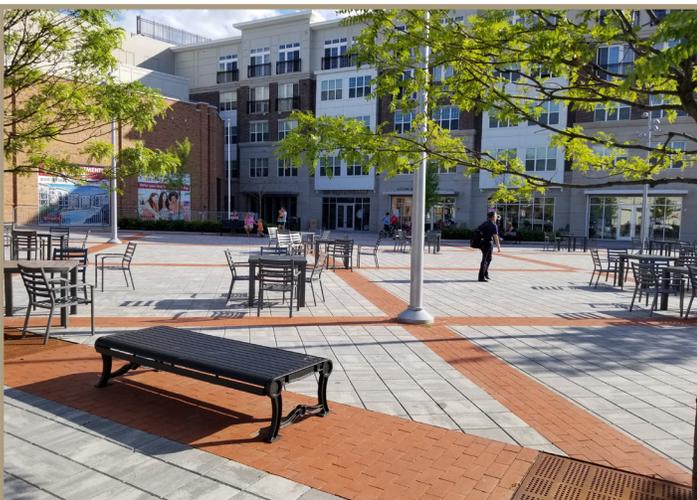


Figure 40. Metuchen has created a brand new plaza downtown. Movable furniture will allow the space to host markets and concerts.

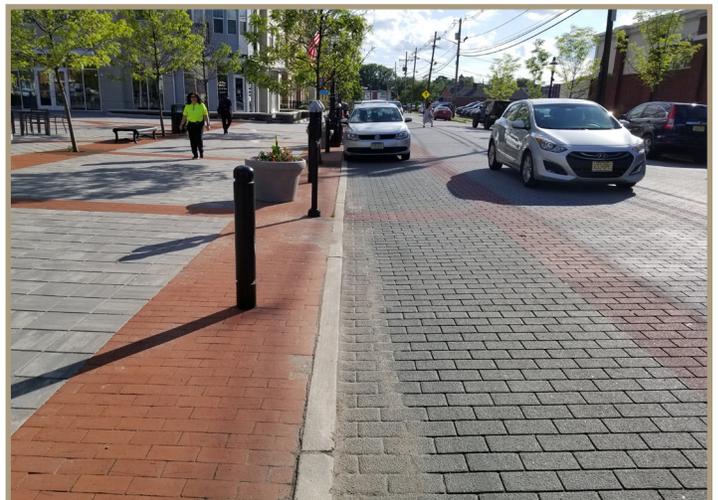


Figure 41. The new Metuchen plaza is flush with the surrounding streets, maximizing flexibility.

Recommendations and Next Steps

The concepts presented here are intended to help Cranford visualize the potential that exists around Post Office Plaza. The following steps should be taken to continue building momentum for the transformation.

I. Install a Demonstration Project

Demonstration projects, also referred to as Tactical Urbanism, are an approach to neighborhood building that use short-term, low-cost, scalable interventions to effect long-term change related to street safety and public space. This approach can draw attention to perceived shortcomings, widen public engagement, test interventions, and inspire action. These projects can include installing temporary bicycle lanes with paint, chalk or tape; painting crosswalks and curb extensions to calm traffic; or constructing temporary streetscape enhancements like parklets and planters and placing them on the sidewalk or in a parking space. Cranford could use a demonstration project to test out a street closure.

Benefits of Demonstration Projects

Speed

These projects allow a municipality to quickly make necessary safety and livability improvements while the permanent improvements move through the various project design and funding steps.

Flexibility

Demonstration projects provide flexibility in that improvements can be temporary. Rather than debating the costs and benefits of a sidewalk extension, a municipality can paint one and observe the new dynamic between pedestrians and drivers without committing to a permanent change. 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.

Affordability

These projects offer a “lighter, quicker, cheaper” implementation through which the municipality can test new concepts—like a new bicycle lane or pocket park—without breaking the bank. This means using low-cost materials such as paint and plastic bollards instead of concrete.

Community Input

At its core, demonstration projects are designed to spark a conversation about long-term change in the direction of complete streets. The project can be used to solicit local ideas for planning challenges, taking the debate out of City Hall and placing it on the street where people can visualize and respond to the proposed changes. Demonstration projects seek to spur conversation around neighborhood improvements, allowing residents to evaluate changes before permanent installation.



Figure 42. New Brunswick, NJ, uses plastic bollards to prevent illegal parking near intersections. After a successful trial at one intersection, the city has added them throughout the city.

Economic Development

By creating a more welcoming environment for pedestrians, demonstration projects can spur economic development in commercial corridors that rely on walk-in consumers. They can also provide new outdoor space for restaurants by converting a single parking space into a protected seating area. These projects develop social capital between citizens and organizational capacity between public and private institutions.

Resources

The “Tactical Urbanist’s Guide to Materials and Design” (<http://tacticalurbanismguide.com/guides/tactical-urbanists-guide-to-materials-and-design/>) provides an excellent guide on what materials are appropriate to use for demonstrations, pilots, or semi-permanent installations.

Examples

Cranford can use these principals to test portions of the concept designs. For example, the plaza can immediately be expanded by blocking off the pull-in parking spaces and replacing them with a parklet (Figure 43). Doing so would add new seating, eliminate the traffic conflicts created by those spaces, and help residents visualize a larger plaza.

Currently, Cranford closes Eastman Street or Miln Street for single-day events. A demonstration project can be used to close one of the streets for a longer period to see how doing so will affect businesses, residents, and traffic. Cities around the country have used paint and planters to quickly close a roadway for an extended period of time - from a few weeks to a full year (Figure 44, Figure 45).

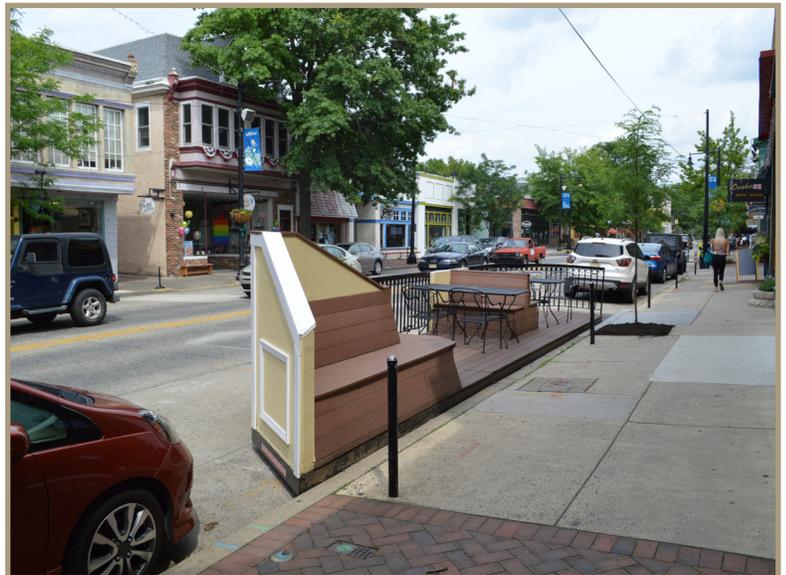


Figure 43. A parklet in Collingswood, New Jersey.



Figure 44. Tontine Crescent Tactical Plaza in Boston, MA. Photo: Ground Inc. A permanent design is in the works.



Figure 45. In 2015, Jersey City created a new pedestrian plaza using planters, paint, tables and chairs. The plaza was successful and extended in 2018. Now the city is designing a permanent plaza with stone pavers, larger planters, benches, pedestrian safety bollards, and other public space features.

2. Develop a Complete Streets Implementation Plan

Adopting a complete streets policy, as Cranford did in 2013, is an important first step toward implementation, as it defines the meaning of complete streets, establishes goals, and lays out the ways in which the municipality will accomplish the goals. The most successful policies state that complete street practices and principles should be a standard part of regular roadway maintenance, planning, and design. An implementation plan and checklist can also be developed to ensure that complete street solutions are incorporated on roadways throughout the borough.

Forming a Complete Streets Advisory Committee could also prove beneficial in promoting implementation. Additionally, points are available to municipalities who are seeking Sustainable Jersey certification for adopting and instituting a complete streets policy. NJDOT offers a guide to policy development and a separate guide on how to create an implementation plan. These resources are among those available at <http://njbikeped.org/complete-streets-resources>. The state recently released a new model policy guide, which could be used as a template for updating Cranford's municipal policy (https://www.state.nj.us/transportation/eng/completestreets/pdf/CS_Model_Policy_2019.pdf). Developing a Complete Streets Implementation Plan, Bicycle and Pedestrian Plan, and/or Complete Streets Checklist are all additional tools that Cranford can employ to continue to advance complete streets throughout the township.

3. Involve the Community and Provide Educational Opportunities

Cranford residents are right to be proud of their downtown. Making a major change to a downtown space, as is proposed here, is likely to illicit a range of responses. It is important that Cranford proactively engage the public and gather feedback through every stage of the process, to ensure that the final design is one that all residents and businesses can be proud of. The renderings provided in this report are an important tool to use in that public engagement process.

If Cranford decides to pilot a closure of Eastman Street, asking local artists and community groups to help design pavement paintings for the temporary pedestrian plaza space, would be a great first step to build community ownership. Incorporating children in the process presents an excellent way to expand knowledge of complete streets and civic engagement. Alternatively, local artists can work with groups of volunteers to identify artwork that speaks to Cranford's history, culture, or unique identity. The painting process can also deploy volunteers and can provide an excellent opportunity to build community support. Demonstration projects often works best when employed with such a community-driven approach.

Education is an essential element in creating safer streets for all users. Reminding roadway users of pedestrian crosswalk laws provides one tool for encouraging vehicles to watch for pedestrians. There are additional opportunities to provide positive encouragement as well. The Street Smart NJ campaign, which Cranford has used in the past, is one marketing tool that municipalities can employ to promote safe driving, walking, and bicycling (see Appendix for additional details). Safe Routes to School programs provide various educational opportunities for youth and parents. Community events provide an excellent opportunity to spread awareness about complete street goals. One such example can be found in New Brunswick's Ciclovía, which temporarily closes a street to cars and opens it up to bicyclists, pedestrians, and various activities (Figure 46).



Figure 46. New Brunswick, Ciclovía, an excellent example of an opportunity to combine complete streets education with community building.

Conclusion

Downtown Cranford is ready for a transformative change. Redesigning Post Office Plaza to put pedestrians first will help make downtown a more attractive destination for both residents and visitors, helping to support local businesses. Redesigning the plaza also provides an excellent opportunity to address significant safety issues and ADA deficiencies. This report provides four concepts for improvement, with concepts 3 and 4 identified by stakeholders as their preferred vision.

Concepts 2 and 3 can be done quickly and at a low cost through temporary demonstration projects. By making the changes quickly with low-cost materials, the municipality can receive meaningful feedback from residents based on the real-world experience. If the improvements are found to be ineffective, or have unintended consequences, they can be removed just as quickly.

Concept 4 cannot be tested in this manner, but the conceptualizations in this report will help residents envision the changes and share their thoughts. As feedback is collected, the municipality can move to acquire funding and engineer a buildable project that residents will be able to enjoy for decades to come.



Figure 47. Post Office Plaza as seen December, 2018.

Appendix

A. Street Smart NJ Campaign Resources

B. Potential Funding Resources

C Design Resources

STREET SMART

STREET SMART NJ FACT SHEET

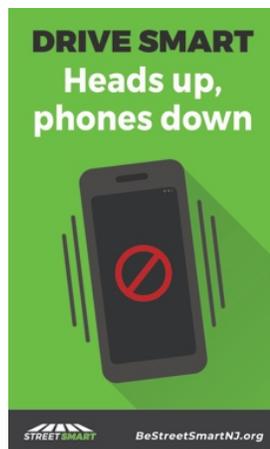
What is Street Smart NJ?

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.sustainablejerseyschools.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:

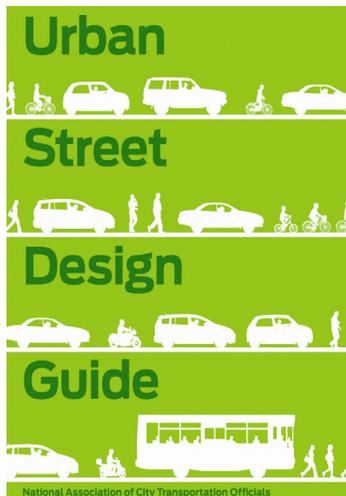
Sustainable Jersey Grants Portal: <http://www.sustainablejersey.com/grants-resources/grants-portal/>

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

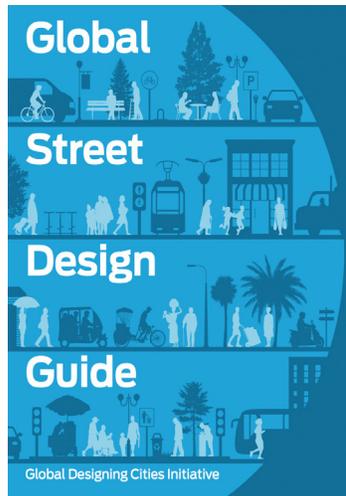
Federal Funding
1. US Department of Transportation (USDOT)
a. Better Utilizing Investments to Leverage Development (BUILD, replaced TIGER)
2. Federal Highway Administration (FHWA) Programs
a. Congestion Mitigation and Air Quality Improvement (CMAQ)
b. Surface Transportation Program (STP)
c. Highway Safety 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

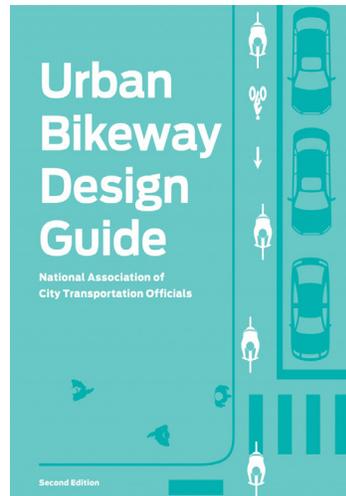
NACTO Guides



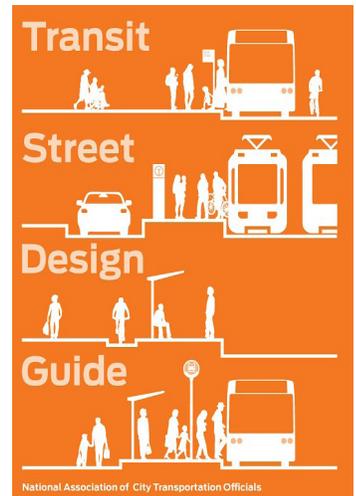
[Urban Street Design Guide](#)



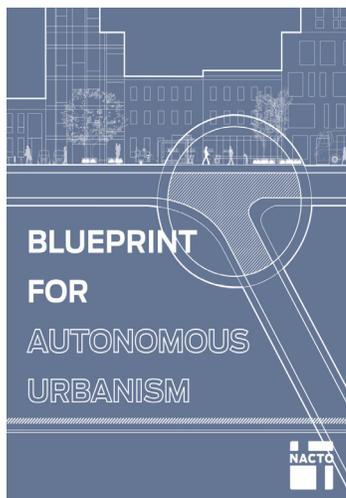
[Global Street Design Guide](#)



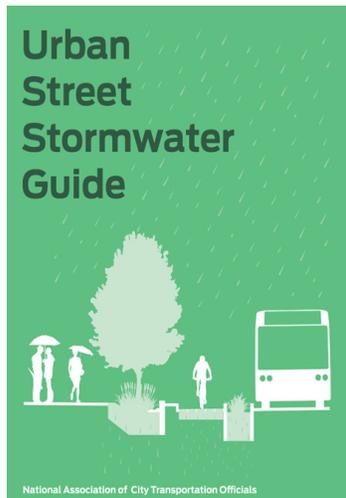
[Urban Bikeway Design Guide](#)



[Transit Street Design Guide](#)



[Blueprint for Autonomous Urbanism](#)



[Urban Street Stormwater Guide](#)

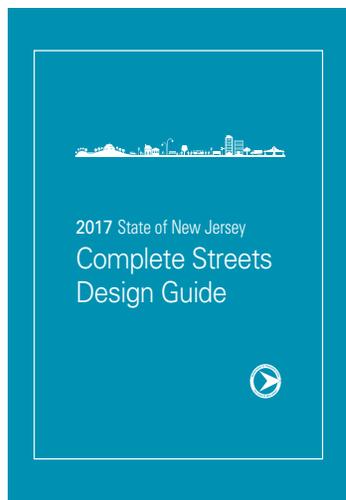


[Bike Share Station Siting Guide](#)

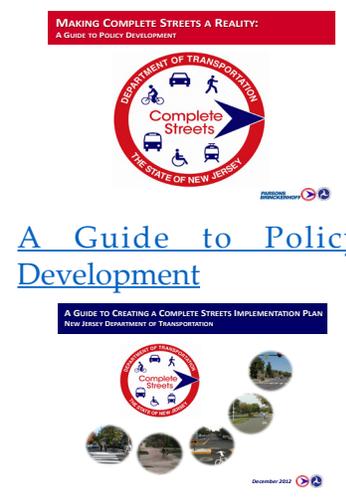
NJDOT Guides



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

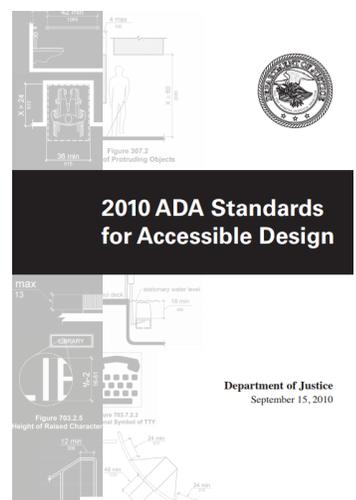


[2017 State of New Jersey Complete Streets Design Guide](#)



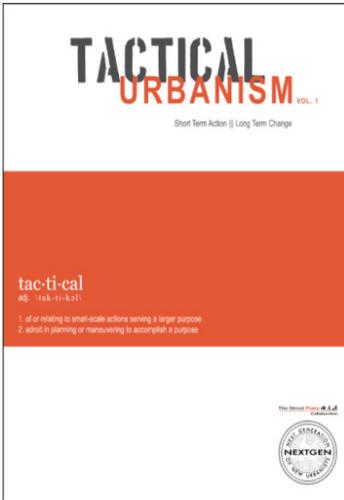
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ADA Guidelines

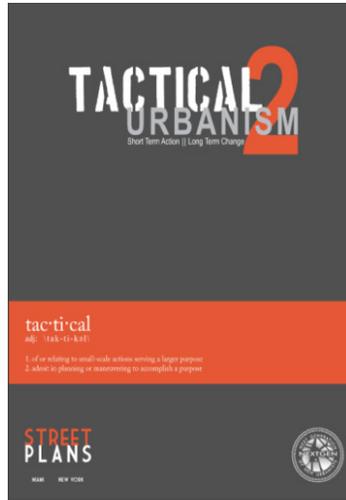


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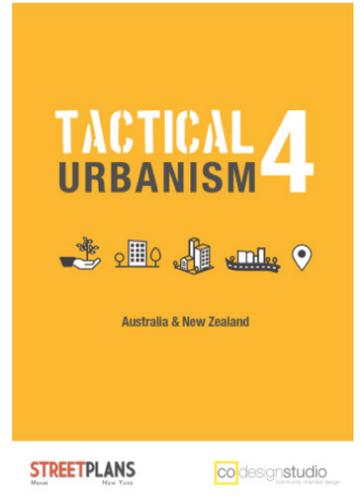
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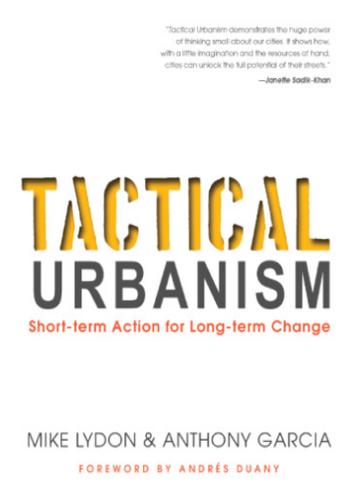
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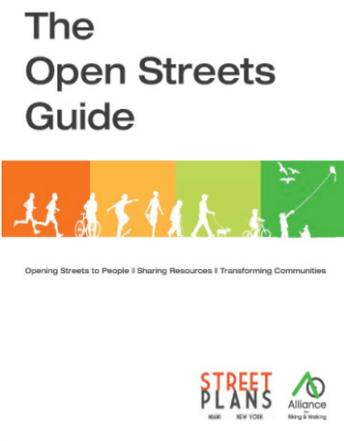
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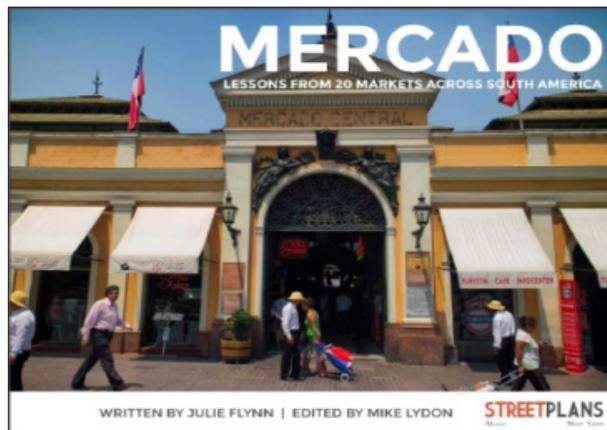
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