

NJTPA LONG RANGE TRANSPORTATION

# PLAN 2050

Transportation ▶ People ▶ Opportunity

PLAN 2050 BACKGROUND PAPER

# Active Transportation in the NJTPA Region

SEPTEMBER 2020



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# About the NJTPA

The NJTPA is the federally authorized Metropolitan Planning Organization (MPO) for 6.7 million people in the 13-county northern New Jersey region. Each year, the NJTPA oversees more than \$2 billion in transportation improvement projects and provides a forum for interagency cooperation and public input. It also sponsors and conducts studies, assists county planning agencies and monitors compliance with national air quality goals.

A Metropolitan Planning Organization (MPO) is a federally mandated and federally funded transportation planning agency made up of representatives from local government and key transportation agencies. Congress created MPOs to give local elected officials a stronger role in guiding federal transportation investment and to ensure that these decisions are based on a continuing, cooperative and comprehensive (“3C”) planning process.

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# Introduction

Active transportation—human-powered methods of traveling such as walking and biking—is essential to the North Jersey transportation system and to the region’s economic vitality. Surveys and public outreach conducted by NJTPA consistently find people value living in walkable places. A growing number of the region’s residents use active transportation for all or part of their commute to work, and many rely on it for recreation and short non-work trips.

But enabling travelers to walk and bike safely to desired destinations requires sidewalks, bike lanes, crosswalks and other infrastructure that is built to high standards and connects neighborhoods to schools, shopping, transit and other locations. These connections are the building blocks of the type of vibrant community many residents desire. Increasingly, towns are implementing policies to create “complete streets” that accommodate walking and biking along with vehicles and are welcoming to all travelers, young and old.

Improving walking and bicycling infrastructure also supports the NJTPA goal of creating great places to live through coordination of land use, transportation and economic development. This paper discusses the current state of walking and biking in the region and offers recommendations to enhance active transportation in order to provide insights and direction for Plan 2050: Transportation, People, Opportunities, the NJTPA’s next long range transportation plan.

*Note: This paper was prepared at the early stages of the COVID-19 pandemic and does not directly address the possibly drastic changes to travel and transportation that may occur as a result of the crisis in the months and years to come. However, even at the earliest stages, it is apparent that the crisis has added to the importance of walking and biking as a means of exercise, recreation and safe mobility. Many communities are closing streets to provide increased opportunities to walk and bike, recognizing that outdoor activities carry a greatly reduced risk*



*of virus transmission. The measures discussed in this paper therefore are likely to take on added relevance to community planners and officials as they address the current crisis and prepare for future threats. The NJTPA will monitor developments and continue addressing this topic within its associated planning programs as needed.*



# Benefits of Supporting Walking and Bicycling

Walking is the oldest and most common form of human transportation, and bicycles were seeing everyday use long before the automobile existed. However, for much of the last century, cars were a much higher priority, with government and the private sector cooperating to enhance auto travel and create car-oriented suburbs across much of the United States. As highways grew, extending into and through all major cities, active travel modes—and in many areas, bus and rail transit—were usually treated as secondary concerns.



That outlook has changed in recent years, as the inefficiencies and environmental impact of auto-centric transportation policies have become clear. While automobiles remain essential for travel in North Jersey—especially given the legacy of past planning and development practices—the NJTPA and its partner agencies seek to balance investments to encourage walking and biking and satisfy the needs

and desires of people to walk or bike routinely.

Expanding active transportation in the NJTPA region is justified by the benefits it provides:

**1. *Economic*** Active transportation supports the efficient functioning of the transportation system and the economy on which it depends. Walking and biking trips relieve the roadway network of a large number of auto trips, easing congestion, and make possible convenient alternatives to driving for large numbers of residents. Supportive active transportation infrastructure such as sidewalks, bike lanes, trails, and crosswalks around schools and downtown areas helps connect people to important destinations in their own communities and supports local commerce.

These choices can be especially valuable for people who do not drive, including young people walking to school, elderly trying to access a health care facility, or low-income people traveling to work. It also gives access to the transit system to reach destinations elsewhere in the region and beyond. This supports the NJTPA's stated goal of enhancing the connectivity of the transportation system.

**2. *Health*** Walking and biking naturally involve physical activity, which provides a broad range of physical and mental health benefits. Thus, increased investment in safe walking and biking infrastructure saves lives in two ways: it reduces fatalities and serious injuries caused by auto crashes and also helps prevent chronic illnesses, reducing health care costs.

Building more long-term active transportation enhancements can directly address New Jersey’s challenges with rising obesity, which is partly due to sedentary lifestyles. New Jersey’s rate of obese adults has increased by 60 percent since 2001. Declining physical activity is among the major contributors to the rising rates of obesity, heart disease, diabetes and other chronic health conditions. According to the New Jersey Department of Health, approximately one in four New Jersey adults (27 percent in 2017) was obese and nearly half of the state’s adult population are projected to be obese by 2030.

**3. A Cleaner Environment** According to the New Jersey Department of Environmental Protection (NJDEP), on-road transportation accounts for over 40 percent of greenhouse gas emissions and adds to other pollutants such as particulate matter and nitrous oxides. While New Jersey has been working on many initiatives to reduce the impacts of transportation on air quality (such as increasing alternative fuels options, diesel retrofits for trucks, etc.), improving the ability to choose walking or biking for at least some trips also mitigates emissions. Walking and biking have zero emissions and, as such, help mitigate asthma and

other health risks from poor air quality. The state’s asthma rate is nine percent among both adults and children, which is higher than the national average of about 7.5 percent. However, there is a disparity among Black and Hispanic populations in New Jersey, which suffer a much higher asthma rate of around 14 percent.

**4. Access and Stronger Communities** Remaking communities to encourage walking and biking also enhances quality of life, strengthens communities, and increases access to many destinations and travel options. The real estate firm *Redfin* in 2020 found that homes within walking distance of schools, shopping, parks and other urban amenities sell for an average price 23.5 percent higher than those in more auto-oriented areas. Recognition of the importance of enhanced livability has helped spur many communities to embrace complete streets goals and policies. Safe and attractive walking and biking routes are especially critical in low-income communities, communities of color, and for disabled residents, as these improve access to various destinations (such as schools, employment, or medical services) both directly and through connection to public transportation.

## EXAMPLE OF ACTIVE TRANSPORTATION INITIATIVE

### Morris Canal Greenway Corridor Study

Conducted by the NJTPA, *this study* identifies a continuous route of 111 miles for development of a world-class greenway, including pedestrian and bicycle facilities, along or close to the route of the historic Morris Canal. The greenway route makes connections between all the remaining

segments of the original canal towpath. When completed the greenway will provide North Jersey residents a facility for recreation and active transportation. It will also provide connections between business districts along the route.



Newark

# Existing Conditions and Challenges

North Jersey's extensive multi-modal transportation network has important advantages in accommodating and supporting active transportation. Much of the region developed around rail stations or street car lines prior to the explosive growth of automobile travel, making these areas conducive to walking. Also, as New Jersey is the nation's most densely populated state, even newer communities often have schools, stores and other destinations within at least potential walking and/or biking distance of residential areas if the needed infrastructure is available. As the NJTPA considers short- and long-term approaches to enhancing active transportation in the region, it must find ways to capitalize on these advantages while addressing the challenges discussed in this section.

## EXTENT OF WALKING AND BIKING

Four percent of commuters in the NJTPA region travel by foot or bicycle, according to the 2014-2018 American Community Survey (ACS). Walking and biking account for ten percent of non-commute trips, based on the NJTPA and New York Metropolitan Transportation Council (NYMTC) Regional Travel Household survey. Most of these are walking trips, with bicycling accounting for less than 0.5 percent of both commute and non-commute travel. Active transportation is much more common for student travel to and from schools—25 percent of students who live within a mile of school walk or bike there. In dense, urban areas like Newark or Jersey City some schools report nearly 80 percent of their student body walking or biking to or from school. Transit-related

trips also tend to correlate with higher walking rates. *Research shows* that 35 percent of transit users walk more than 30 minutes to and from transit each day.

Over the next two to three decades, several factors will increase walking and biking in the region and the need for public investment to support it. Population is expected to grow by a million (from 6.7 to 7.7 million, a 15 percent increase) from 2015 to 2045, putting more demand on all aspects of the transportation system. In addition to demographic-driven growth, demand for active transportation



likely will grow with continually increasing focus on climate change, the growing influence of the complete streets movement and greater recognition by public and private interests of the economic value of active transportation, as discussed previously.

Biking, in particular, will likely grow at increasing rates. Recent research by the *Urban Land Institute* has shown that bicycling is currently the nation’s fastest growing mode of travel to work, although it still accounts for a small fraction of commutes. According to the Bike and Walk Alliance, the number of American bicyclist commuters increased by 50 percent from 2000 to 2016.

### NEED FOR INFRASTRUCTURE

Efforts to increase bicycle and pedestrian travel are often hampered by a perceived lack of personal safety. According to the Urban Land Institute’s 2016 report on active transportation, “the biggest impediment to more widespread bicycle use is people’s fear of being hit by a motor vehicle.” The infrastructure investments needed to improve safety while bolstering public confidence and facilitating walking and biking can be on- or off-road and are needed throughout the region.

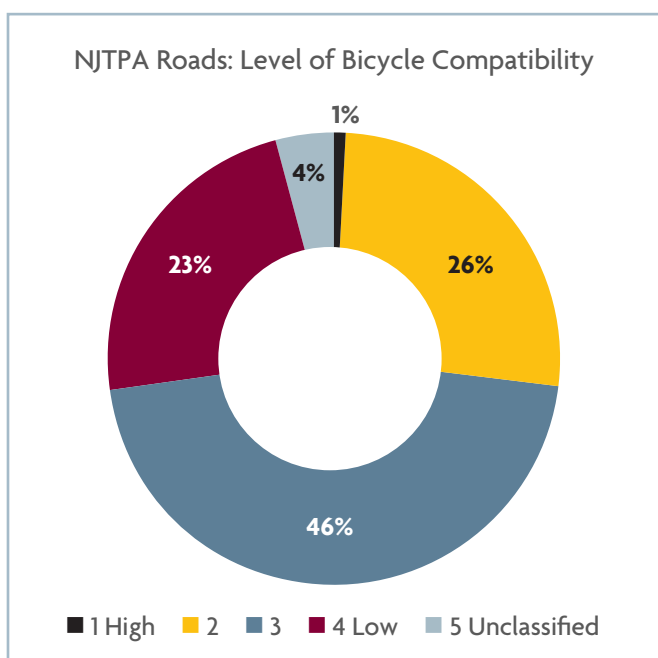


Figure 1: The Level of Bicycle Compatibility (LBC) analysis classifies roadways along the spectrum of bicycle suitability.

**Off-road facilities** New Jersey has a network of over 214 miles of (off-road) paths shared by bicyclists and pedestrians. The trails—many of them built along former rail or canal rights-of-way—form a safe network to walk and bike and can provide connections across the region. Trails primarily serve recreational uses and sometimes parts of work trips. Many are under the jurisdiction of municipalities or counties, but several longer trails span multiple jurisdictions and require special efforts to fund and coordinate improvements. These trails, including the Barnegat Trail in Ocean County and the Morris Canal Greenway in six counties, also boost local economies by attracting travel and tourism.

**On-road facilities** While continued development of off-road trails can help supplement the region’s pedestrian/biking network, most travel will take place on roads. Improving these facilities for pedestrians and bicycles is an important way to increase walking and biking. On-street gaps—such as a missing section of sidewalk or a disjointed bicycle network--can make travel unsafe, discouraging people from cycling or walking to local destinations. Closing these gaps and creating more extensive on-road links is critical to connecting communities to key destinations.

As there is no central inventory of active transportation facilities, the NJTPA has repurposed existing data to help locate network gaps. The NJTPA developed a method of classifying segments of the road network by suitability for bicycling. The Level of Bicycle Compatibility (LBC) uses methods similar to the Delaware Valley Regional Planning Commission (DVRPC) and the Mineta Transportation Institute to analyze roadway design, posted speed limits, number of lanes and truck volume data and categorize all roads and trails in the region into the following designations:

- **LBC 1:** Little to no stress. Suitable for all cyclists, including children.



- **LBC 2:** Little traffic stress. Suitable for most adult cyclists, but more challenging for children.
- **LBC 3:** Moderate traffic stress. Comfortable for those who already ride bicycles.
- **LBC 4:** High traffic stress. Only for very experienced bicyclists.
- **LBC 5:** Unable to classify.

Most roads in the region fall into the LBC 3 type, which means they are unsuitable for people who are not already bicyclists. This points to a need for improvements such as adding bike lanes or widening shoulders on some of the most important connectors to increase rider comfort and overall bike use.

The LBC analysis also helps measure connectivity between bicycle facilities and regional transit stations or other destinations. However, many roads act as barriers, curtailing analysis of connectivity for large sections of the region. These “barrier roads,” such as Route 21 in Newark or Route 1 & 9 in Elizabeth, criss-cross the region in ways that efficiently connect drivers to regionwide destinations but impede active transportation to and through neighborhoods. These roads normally have high volumes and speeds, and some are even major transit corridors. Though a small subset of total miles in the region, the distribution of barrier roads throughout the region breaks up what otherwise could be a highly connected bicycling or pedestrian network. This raises an important objective for future efforts to promote active transportation: the need to identify and address improvements that will allow bicyclists and pedestrians to safely navigate around and across these barrier roads.

### DATA LIMITATIONS

A lack of data hampers efforts to assess how and where to improve active transportation infrastructure. While federal, state and local agencies collect information on auto and transit infrastructure and use, data collection on walking and biking is decentralized, causing issues with quality, completeness and

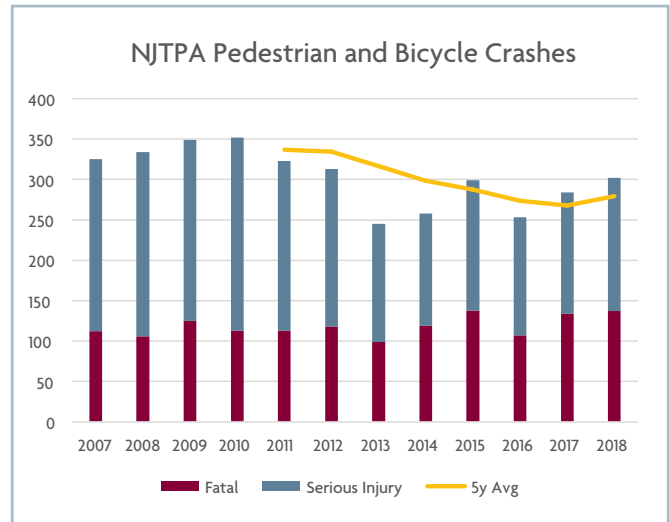


Figure 2: Pedestrian and Bicycle fatal and serious injury have increased in proportion to total fatal and serious injury crashes (including vehicles).

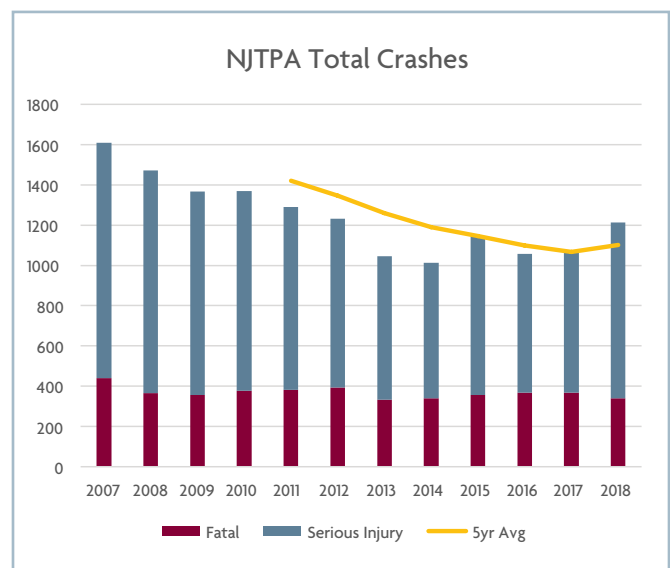


Figure 3: All crashes. The statewide total of crash injuries and fatalities has trended downward from 2007 to 2017 with an uptick in 2018.

consistency across jurisdictions. For example, while many local agencies have added bicycle lanes and other bike facilities in recent years, no central repository for information on their location, extent, and usage exists, leading to a hodgepodge of data sources.



Likewise, a comprehensive sidewalk inventory (inclusive of county and local roads) does not currently exist in the NJTPA region.

The lack of data undermines growing efforts to use data and performance metrics to improve local planning and to meet requirements for performance-based planning under federal and state funding programs. Therefore, standards for the data and programs to support local data collection and use could become part of federal surface transportation legislation, with MPO coordination at the regional level.

In the meantime, the NJTPA continues to research and use alternative data methods for approximating bicycle and pedestrian volume or demand. This includes exploration of creating a sidewalk inventory using satellite imagery and other technology. The

NJTPA is also using its annual work program to broaden efforts to collect and compile systemic pedestrian and bicycling volume data through reassessment of regional transportation modeling needs to include exploration of modeling for pedestrian and bicycling demand.

### SAFETY

Aside from a slight increase in 2018, total crash fatalities and serious injuries (FSI), including vehicle crashes, have largely trended downward since 2007. However, pedestrian fatalities have trended upward since 2014. While federally mandated annual safety performance analyses show overall significant progress for the state (hitting 2018 targets for all total transportation-related fatalities and serious injuries), non-motorized fatal and serious injuries increased and exceeded annual targets.

The state’s pedestrian fatality rate has increased and consistently exceeds the national average, which is why the Federal Highway Administration (FHWA) designated New Jersey a pedestrian focus state and the City of Newark a pedestrian focus city. In 2017, 29 percent of fatal crashes in New Jersey involved pedestrians or bicyclists, nearly double the national average of 16 percent. The upward trend in pedestrian and bicycle fatal and serious injury crashes (even using 5-year rolling averages to flatten annual fluctuations) illustrates a very serious need for increased investment in safety infrastructure for pedestrians and bicyclists.

In the NJTPA region, these crashes are distributed almost evenly across the state, county and the municipal roadway systems (see Figure 4), though they tend to occur at a greater rate per mile of roadway on state and county facilities. These facilities are among the busiest roads in the region and many work, school, shopping and recreational destinations are along these roads. Many also lack adequate pedestrian and bike infrastructure.

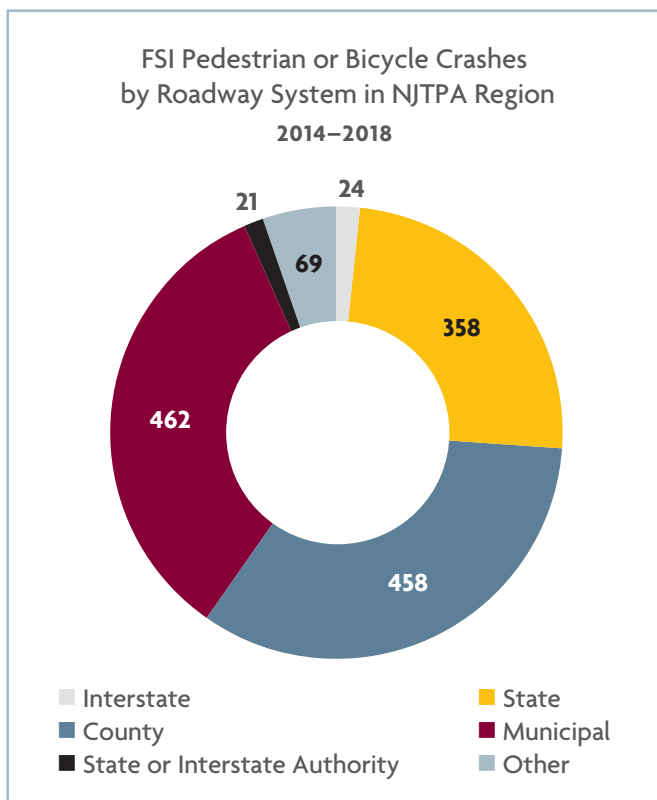


Figure 4: A majority (approximately two-thirds) of fatal and severe injury (FSI) crashes among pedestrians and bicyclists occur on state and county roads.

Crash data for the NJTPA region shows the following key facts about bicycle and pedestrian crashes with fatalities and serious injuries:

- 70 percent occurred on roads classified as “urban”
- 57 percent occurred on high-capacity arterial roads, most of which have characteristics of barrier roads lacking pedestrian and bicycle connectivity to local destinations
- A third occurred in just 13 municipalities (see Appendix)
- Most occurred in “dark” conditions

- More were classified as hit and run than among all vehicle crashes

All of these factors illustrate the disproportionate dangers for pedestrians and bicyclists on the region’s road network.

# Strategies for Improving Active Transportation

The NJTPA region is very diverse, ranging from the dense urban environment of Jersey City, to the rural lands in Hunterdon, Warren and Sussex counties to the suburban areas along the I-287 corridor and many places in between. With this diversity comes differing needs and challenges related to support for walking and biking. However, all these different landscapes have places where walking and biking can flourish. The strategies discussed below offer ways to cultivate those places and realize improved active transportation options for residents.



## INFRASTRUCTURE

North Jersey’s transportation infrastructure ranges from major highways, arterials and railways designed to accommodate high-volume, long distance travel, to local streets, sidewalks and trails oriented towards shorter trips. By nature, infrastructure improvements to enhance walking and biking involve the shortest

trips and are concentrated at the municipal level. However, infrastructure projects often require coordination, funding and support of agencies at various levels of government. As discussed later, the NJTPA supports planning and implementation of the major categories of infrastructure improvements for walking and biking. These include:

**“Calming” Streets** Streets can be made more conducive to walking and biking through a variety of improvements. Particularly in downtown or residential areas, “traffic calming” measures—such as road diets, decreased lane widths and speed humps—are widely used. A key goal of these measures is reducing auto speeds to make the environment more conducive to walking and biking and avert more severe crashes involving vulnerable users. If a car traveling 40 MPH strikes a pedestrian, the survival rate is 20 percent, versus a 90 percent survival rate if the vehicle is traveling 20 MPH. The physical modification of streets can combine with gateway treatments such as signs, landscaping and pavement markings to signal drivers that they are entering zones with higher pedestrian and biking activity. Other safety improvement measures are discussed further below.

**Pedestrian Facilities** Sidewalks are a feature of most residential neighborhoods but often do not extend to allow residents to walk to shopping, schools, medical facilities or other destinations. It can be a burden on municipal budgets to address gaps in the extensive network of sidewalks. As discussed later, detailed assessments such as Road Safety Audits can



help identify and prioritize necessary sidewalk and other related infrastructure upgrades. Local planning regulations can require businesses and developers to contribute to sidewalk improvements. In addition, road upgrades can incorporate sidewalk and biking infrastructure during the design phases. Other key pedestrian infrastructure elements include pedestrian countdown timers, high-visibility crosswalks, pedestrian refuge islands, curb extensions, and leading pedestrian intervals (LPIs) which give pedestrians a head start to cross in advance of turning vehicles.

**Bicycle Networks** For bicyclists, a network that increases safety and comfort involves destinations connected by reasonably continuous routes with multi-use trails, bicycle lanes and roads with ample shoulders or shared lanes. Some research has validated the “if you build it, they will come” approach. That is, increasing bicycle connectivity correlates positively with increased bicycling for all trips, not just recreation. One research *study* quantifying bicycle connectivity suggested giving priority to upgrading on-road bicycle facilities in ways that accommodate most adult cyclists but may demand some caution for children (corresponding with achieving a higher share of the NJTPA’s LBC2 road designations, discussed previously).

Bike lanes are increasingly part of strategies to increase non-motorized travel, particularly in urban and downtown areas. However, not all bike lanes offer the type of protection that will encourage more cautious riders. Some bike lanes only consist of pavement markings and are likely to be off-putting to novice riders. Bike lanes protected by dividers or a parking lane encourage wider use but can be difficult to implement in many locations because of competing uses for curbside space, such as for parking or deliveries.

**Pathways to Transit** Accessibility to public transit is a key element of a robust active transportation network. Investment in more accessible transit infrastructure—such as safer walking paths to bus stops and bus pull-outs that enable safe boarding away from moving traffic—can also address equity issues, since the most frequent transit users are people of color and low-income residents. This has come into sharp focus during the coronavirus pandemic as essential workers, from medical staff to grocery store employees, grapple with transit service and capacity reductions due to health concerns. In the NJTPA region, 13 percent of workers use public transit, though the rate is higher in more urban areas with extensive more public transit infrastructure, such as 48 percent of work trips in Jersey City and 26 percent of work trips in Newark.

#### EXAMPLE OF ACTIVE TRANSPORTATION INITIATIVE

##### JC Walks—Jersey City Pedestrian Enhancement Plan

This 2018 study, supported by an NJTPA Subregional Study grant, developed a Pedestrian Enhancement Plan that identifies specific improvements that reinforce the pedestrian-friendly environment along city streets. The study included Walkability Workshops and demonstration projects that consisted

of temporary physical improvements such as curb extensions, public space amenities, and wayfinding signs.



In 2018, the NJTPA and NJ TRANSIT completed a *Bicycle and Pedestrian Access Study* of six bus and rail stops in the region and recommended a variety of design features, such as on-street bicycle accommodation, bicycle parking for riders at transit stations, and Rectangular Rapid Flash Beacons (RRFBs), which enable pedestrians to activate flashing lights at otherwise unsignalized crossing locations. Other improvements to transit access may include lengthening the size of the bus stop area, relocating stops to the far side of intersections and improving lighting.

### *Americans with Disabilities Act (ADA)*

**Compliance** As with all infrastructure improvements, observing the federal Americans with Disabilities Act (ADA) is a requirement to accommodate those with mobility limitations. These improvements can also create biking and walking routes for all through installation of curb and entrance ramps and wide doorways, removal of obstructions, and more. Agencies and local governments should go beyond the minimum requirements of the ADA by consulting groups representing people with disabilities, human services organizations, senior citizens groups and other members of the community on design and implementation of ADA measures to insure their effectiveness. Accessible pedestrian infrastructure is also essential so people of all abilities can reach bus, rail, and paratransit, as noted in the NJTPA's regional *Coordinated Human Services Transportation Plan*.

### **SAFETY**

Safety is a key element of transportation, especially for those who walk or bike. Given the multi-jurisdictional nature of active transportation facilities, all levels of government must be responsible for safety.

Approaches to safety improvements can be either site-specific or systemic.

**Site-specific** Road Safety Audits (RSA) are an example of the site-specific approach. Over the past several years, the NJTPA has coordinated with NJDOT and localities to conduct RSAs in high-crash areas. This involves identifying hazards and recommending improvements tailored to local conditions. The New Jersey Division of the Federal Highway Administration (FHWA) is highly supportive of RSA initiatives.



Participants in an RSA typically include engineering, planning, public works and enforcement professionals, as well as community representatives, who evaluate potential solutions and recommend improvements. Twenty-two of the 38 recent RSAs in the NJTPA region have led to funding for safety improvements, many at high pedestrian crash locations.

**Systemic** Another safety approach is to identify a wide range of locations where design improvements can remedy a certain set of safety-related roadway problems. For example, an NJTPA initiative will identify priority trail crossings throughout the region and suggest crossing treatments. At a citywide level, another example could be to install high-visibility crosswalks at intersections wider than two lanes and

within one mile of a school throughout the city or town.

**Street Smart** The NJTPA's Street Smart NJ campaign works with communities and other partners to encourage safe travel behavior through public education, complementing infrastructure improvements. The campaign educates pedestrians, bicyclists and drivers on traffic regulations and safe travel behaviors (see [BeStreetSmartNJ.org](http://BeStreetSmartNJ.org)). More than 120 communities have participated in the initiative, which uses both gentle reminders and targeted enforcement. Analysis of safety behaviors among drivers and pedestrians before and after campaigns have found improvements of up to 40 percent. In all these efforts, local officials and planners can draw on resources at the state and federal level for guidance and, in some cases, funding.

## LAND USE DESIGN & TRANSIT ORIENTED DEVELOPMENT

Research shows that the built environment—particularly the way that streets are laid out—can directly affect travel choices, leading to more walking and biking. The key is having a high level of street connectivity, characterized by homes and businesses arrayed along relatively small blocks, with a network of streets in a grid pattern. This is in contrast with the curved streets and cul-de-sacs which typify many auto-oriented suburban housing developments, which require walkers to take long circuitous routes to reach any destination. While it is difficult to undo previous land use decisions, greater connectivity can be applied to new developments or to areas undergoing redevelopment.

Another land use design approach involves transit-oriented development (TOD), which has gained much attention in recent years. As noted, many North Jersey towns developed around rail stations, which are often conducive for access by walking and biking. State-level efforts such as the Transit

Village program seek to capitalize on these stations to promote local economic development, as does the NJTPA's Planning for Emerging Centers program, discussed later in this paper. In addition, there is great untapped potential to expand this emphasis on walkable environments beyond rail stations to bus transit hubs as well. There are approximately 30 bus terminals in the NJ TRANSIT service area (compared to 16 rail terminals), and 250 routes serving more than 16,100 stops in more than 380 municipalities.

## POLICY

Governments at all levels have policy and regulatory tools at their disposal to promote active transportation, including implementing the strategies discussed above.

As noted previously, a growing number of communities and agencies are adopting complete streets policies to guide planning, land use development and infrastructure investments. The NJDOT adopted its Complete Streets Policy in 2009 and added the Complete and Green Streets Model Policy and Guide in 2019. As of March 2020, more than 165 municipalities and eight counties in New Jersey have enacted resolutions to support complete streets and several more have adopted plans, ordinances or policies. As discussed in the next section, NJTPA programs are enhancing the ability of communities to implement complete streets through local projects.

Whether part of complete streets frameworks or adopted independently, land use regulations can facilitate—or hinder—active transportation. For example, new apartments, shopping areas or office buildings typically must meet minimum parking requirements that perpetuate installation of large swaths of blacktop that, in turn, make designing a pedestrian friendly environment more difficult.

Public policies can support active transportation by addressing the impacts of the built environment on





Figure 5: Demonstration projects offer a way to experiment with active transportation infrastructure (Top: Curb extension, Jersey City; Right: Ciclovía, New Brunswick; Bottom: Painted intersection Red Bank.

people’s ability to walk and bike to places they want to go. This includes:

- Zoning reforms that reduce the amount of parking required in new development or redevelopment, such as adopting land use ordinances to create pedestrian-friendly areas that promote physical activity.
- Parking policies that reduce or eliminate minimum parking requirements for developers or offer cost reductions for non-motorized travelers.
- Revising state and local roadways design and access management plans to add strategies such as regulat-

ing driveway locations to reduce conflicts between pedestrians and turning vehicles.

- Reviewing other state and local statutes and regulations to include bicycle and pedestrian accommodation.
- Revising Residential Site Improvement Standards can align roadway design, parking requirements and sidewalk standards to facilitate walking and biking.
- Coordinating across agencies to improve non-motorized data collection and evaluation methods for understanding the impacts of current transportation decisions and where pedestrian and biking infrastructure investments are most critical.
- Increasing attention to equity considerations in evaluating transportation investments to consider communities most affected by the lack of pedestrian access, including low-income communities.

- Using routine maintenance and improvement across levels of government, such as:
    - Publishing repaving schedules and coordinating among jurisdictions to incorporate pedestrian and bicycle improvements into repaving projects
    - Improving communication between agencies on where best to locate bus stops
    - Increasing multi-jurisdictional coordination along high-crash corridors, especially where projects are on county or state roadways adjacent to municipally controlled sidewalks and other infrastructure
  - Increasing support for bike-share systems not only to make biking an easier option but also resolve many first/last mile challenges for transit users and reduce safety conflicts between users.
- Promoting lower-speed micromobility travel options, such as electric scooter sharing, which can potentially complement walking and biking if implemented with adequate guidelines and controls
  - Encouraging economic development programs to increase support for walking and biking
  - Supporting pilot programs and demonstration projects that promote active transportation (Figure 5)
  - Supporting comprehensive Vision Zero policies
  - Encouraging partnerships between the health and transportation sectors to evaluate where active transportation improvements can provide the greater positive health impacts (i.e. health impact assessments).

# Planning and Resources

Several NJTPA programs actively support planning by member city and county subregions to improve active transportation, including helping adapt the walking and biking strategies discussed in this paper to local conditions and needs. These programs include:

- **Subregional Transportation Program**—annual formula-based allocations to support a core set of planning activities by each subregion
- **Subregional Studies Program**—a competitive grant program that allows subregions to study key issues and challenges



- **Planning for Emerging Centers Program**—a competitive program that supports initiatives to create more sustainable, transit-supportive and walkable communities across the region
- **Complete Streets Technical Assistance Program**—in cooperation with Sustainable New Jersey, this competitive program provides expert assistance

- to municipalities seeking to implement complete streets and more vibrant walkable communities
- **Together North Jersey Initiatives**—in cooperation with Rutgers Voorhees Transportation Center and a consortium of public and private groups, Together North Jersey provides, grants, training and technical support on local community development

Various NJTPA regional planning initiatives support these programs and the work of subregions and partner agencies. These include conducting computer modeling, compiling and analyzing transportation data, conducting corridor studies, assessing greenhouse gas impacts and more. A number of efforts, such as the identification of barrier roads noted previously, are specifically focused on walking and biking.

NJTPA also actively coordinates with NJDOT, the Division of Highway Traffic Safety, NJ TRANSIT and public and non-profit partners on state level planning related to active transportation. This coordination includes serving as a partner with the NJDOT in developing and implementing New Jersey's Strategic Highway Safety Plan (SHSP). The plan's focus areas include pedestrians and bicyclists, other vulnerable users, data, intersections, road departures, and driver behavior.

Through its capital programming work, the NJTPA has a role in prioritizing, approving and administering funds for implementing projects to improve active transportation. While there are several funding programs available for this purpose, grants for walking and bicycling improvements are highly competitive. The Rails to Trails Conservancy notes that while biking and walking account for 10.5 percent of travelers nationally, less than 2 percent of

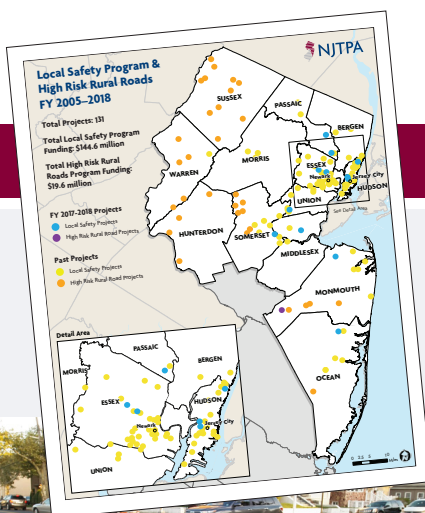


federal funding for transportation went to active transportation investment (2017 figures).

The Fixing America’s Surface Transportation Act or “FAST Act” of 2016 replaced the MAP-21 Transportation Alternatives Program (TAP) with the Transportation Alternatives (TA) “set-asides,” which resulted in an overall reduction in federal support nationally. The loss of a dedicated federal program left states to create their own programs and generally diminished opportunities for many active transportation activities. In New Jersey, the state DOT maintained previous funding levels and their partnership with the MPOs. State, regional and local transportation agencies nationwide continue to receive federal support for technical assistance, grant funding and guidance.

Within New Jersey, there are funding sources that can meet future growing demand for active transportation, though more funding is needed. The following funding pools and programs are available to assist in the construction of active transportation facilities:

- **Local Safety Program:** The NJTPA’s *Local Safety Program* (LSP) uses federal Highway Safety Improvement Program (HSIP) funding to support construction of cost-effective, high-impact safety improvements on county and local roadway facilities to increase safety for all road users. The NJTPA has allocated \$145 million for 115 projects since 2004—see map below. Many of the LSP projects have multi-modal safety elements that enhance active transportation modes.
- **Safe Streets to Transit:** This NJDOT *program* offers funding for municipalities and counties seeking to improve access to transit facilities and all modes of public transportation. Between 2015 and 2019, \$1.78 million was awarded to six sponsors in the NJTPA region.
- **Safe Routes to School:** Administered by NJDOT, this federally funded reimbursement *program* awarded \$9.879 million for 22 school districts in the NJTPA region in 2016 and 2018, for both infrastructure and non-infrastructure projects to support walking and biking to school.



## NJTPA LOCAL PROGRAMS

The NJTPA’s Local Safety and High Risk Rural Roads Programs are a valuable resource for subregions for implementing local pedestrian and bicycle safety measures on the regional roadway network. These competitive programs

use federal Highway Safety Improvement Program (HSIP) funding for multimodal safety treatments including countdown signal heads, high visibility crosswalks, curb extensions, new and upgraded signs and pavements markings and bike lanes. The upgraded intersection (left) at Shrewsbury Avenue and Dr. James Parker Boulevard in Red Bank is one example of a LSP project that enhances pedestrian safety and promotes active transportation trips at a local level.



- **Bikeways:** The NJDOT’s *Bikeways* programs provide annual grants to counties and municipalities to support the state’s goals of constructing 1,000 new miles of dedicated bike paths. Between 2015 and 2019, five projects totaling \$1.692 million received funding in the NJTPA region.
- **Transportation Alternatives Program:** Administered by NJDOT, the *TAP program* provides counties and municipalities with funding to construct a variety of non-traditional projects, many of which support active transportation. Between 2016 and 2018, TAP funding was awarded for 43 projects in the NJTPA region, totaling nearly \$40 million.
- **Congestion Mitigation and Air Quality (CMAQ)/Transportation Clean Air Measures (TCAM):** The NJTPA conducts the solicitation for competitive CMAQ funds for projects that improve air quality and reduce congestion in non-attainment areas, including bike trails. In 2014, CMAQ funds provided \$468,000 for a bikeway project along a segment of the Morris Canal Greenway in Passaic County.
- **Local Capital Project Delivery:** The Local Capital Project Delivery (LCPD) *Program*, administered by the NJTPA, is a competitive program that provides funding to NJTPA subregions to streamline preparation of proposed transportation projects for

eventual construction with federal funding. Initially, Concept Development studies are undertaken to develop preliminary preferred alternatives. Two recent FY19 projects focus on implementing a complete streets plan along Main Avenue in the City of Passaic and County Route 501 (John F. Kennedy Boulevard) in Jersey City.

Many of these funding sources have historically been designated for the construction phase of projects, which means that the projects must be “shovel ready” and comply with the rigors of the federal review process. Many grantees, especially smaller municipalities with fewer resources, have struggled to find staff or funding for the required preliminary engineering and final design phases. In response, the NJDOT developed programs like Design Assistance, which provides additional funding for grantees to work with consultants on design and construction documents. The Delaware Valley Regional Planning Commission’s (DVRPC) *Regional Trails Project* offers another approach to prepare projects for construction readiness. By partnering with the William Penn Foundation, over \$20 million in planning, engineering and construction dollars has been awarded to fill in gaps of the Philadelphia region 800-mile “Circuit” trail system.

## EXAMPLE OF ACTIVE TRANSPORTATION INITIATIVE

### Main Avenue Corridor Improvements (Passaic County)

This Local Concept Development Study supported by the NJTPA is working towards implementing a complete streets plan along Main Avenue in the City of Passaic to improve safety for all roadway users, expand the opportunity for economic development in the Passaic Central Business District and relieve congestion. It has included extensive public outreach, including walkability workshops, a survey, virtual presentations and an interactive map for gathering input.



# Recommendations

The NJTPA's Long Range Transportation Plan addresses needs and issues involving all transportation components, including active transportation, and how they can function together as part of an integrated and efficient transportation system. Defining the role that active transportation can and should play in the region's transportation future is challenging due to the immense geographic diversity, varying demographics, and differing user needs. Based on the analysis and insights presented in this paper, the following are some key recommendations for how the NJTPA can improve active transportation to enhance the region's economic growth, promote sustainability, and champion equitable outcomes:

## 1. *Expand active transportation planning.*

Where possible, NJTPA plans and programs should enhance and give priority to active transportation improvements. Among the key objectives should be:

- Improve connectivity between neighborhoods and key destinations, especially in places with schools, high transit use and lower incomes.
- Encourage local partners to incorporate bicycle or pedestrian elements into roadway projects.
- Implement policies, outreach and educational opportunities for enhancing active transportation.
- Continue to develop plans and provide technical support to advance infrastructure improvements where they are most needed.

2. *Provide support and technical assistance for design and construction*, especially in minority and low income communities. Preliminary engineering and construction support is sorely needed in addition to award of construction funds.

3. *Create an active transportation plan* for the region. Establish a shared vision and specific strategies for developing and implementing a regional network of safe and highly functional active transportation facilities, including on-road facilities.



## 4. *Promote education and public participation*

- Continue and expand the *Street Smart* pedestrian safety campaign.
- Consider additional coordinated efforts regarding educating people and local governments about the safety, health and economic benefits of walking and biking.

**5. *Improve regional data.*** Coordinate with local partners to improve quality and accessibility of existing datasets. Ideally, active transportation-oriented datasets include sidewalks and on and off-street bicycle facilities; gaps in the active transportation network; counts of bicyclists and pedestrians; crash data, including demographic information on people involved in crashes; roadway characteristics; and integration of health and emergency services data. The NJTPA has initiated work to identify network gaps and to count pedestrians. Integration of multiple data sources to analyze and conduct Health Impact Assessments (HIAs), similar to Environmental Impact Statements, should be considered.

**6. *Expand available funding.***

- Analyze federal and state programs to ensure optimal use of all available resources for bicycle and pedestrian facilities.

- Streamline project development processes to ensure efficient use of all available funding.
- Document the benefits of increasing dedicated funding for active transportation, including providing needed information to elected officials at the state and federal level.
- Support efforts to provide engineering assistance to projects receiving federal construction funds.

These recommendations provide direction for the NJTPA to continue supporting active transportation as the agency develops its next long-range plan looking out to 2050. The insights presented here aim to prompt discussion and input as part of the NJTPA's public outreach process for Plan 2050. Just as earlier policies that promoted auto access shaped the economy, communities and lifestyles for generations, policies and improvements put in place today can promote active transportation, helping to balance some of the negative effects of those earlier decisions and potentially benefitting the economy, equity, public health, the environment and mobility.



## CASE STUDY: MORRIS CANAL GREENWAY, BAYONNE

The Mercer Park section of the Morris Canal Greenway in Bayonne is an example of several planning efforts melding into one high-impact, physical improvement.

First, the *Morris Canal Greenway Study* identified sections of the greenway throughout the NJTPA region and created a plan for the greenway's preferred alignments—both those already built (solid green) and recommended routes (dashed line).

Secondly, physical improvements were funded by a 2016 Transportation Alternative (TAP) grant to Hudson County to upgrade a trail section in Mercer Park and a 2016 Local Safety Program (LSP) project to, in part, install a cycle track across and along a portion of JFK Boulevard. The cycle track will cross JFK Boulevard at the intersection of 63rd Street and continue north along JFK Boulevard to Custer Avenue where the cycle track will transition to a sharrow design and connect to a planned bicycle path in McGovern Park less than a quarter-mile to the north.

Thirdly, the Level of Bicycle Compatibility (LBC) and barrier roads analyses validate that this is a priority location for active transportation and provides a key linkage across high stress and barrier roadways. Future planning efforts are encouraged to utilize the LBC and barrier roads analyses to further understand and prioritize improvements that connect active transportation networks.

