



# Fair Haven

## *Active Transportation Plan*

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# 01 INTRODUCTION

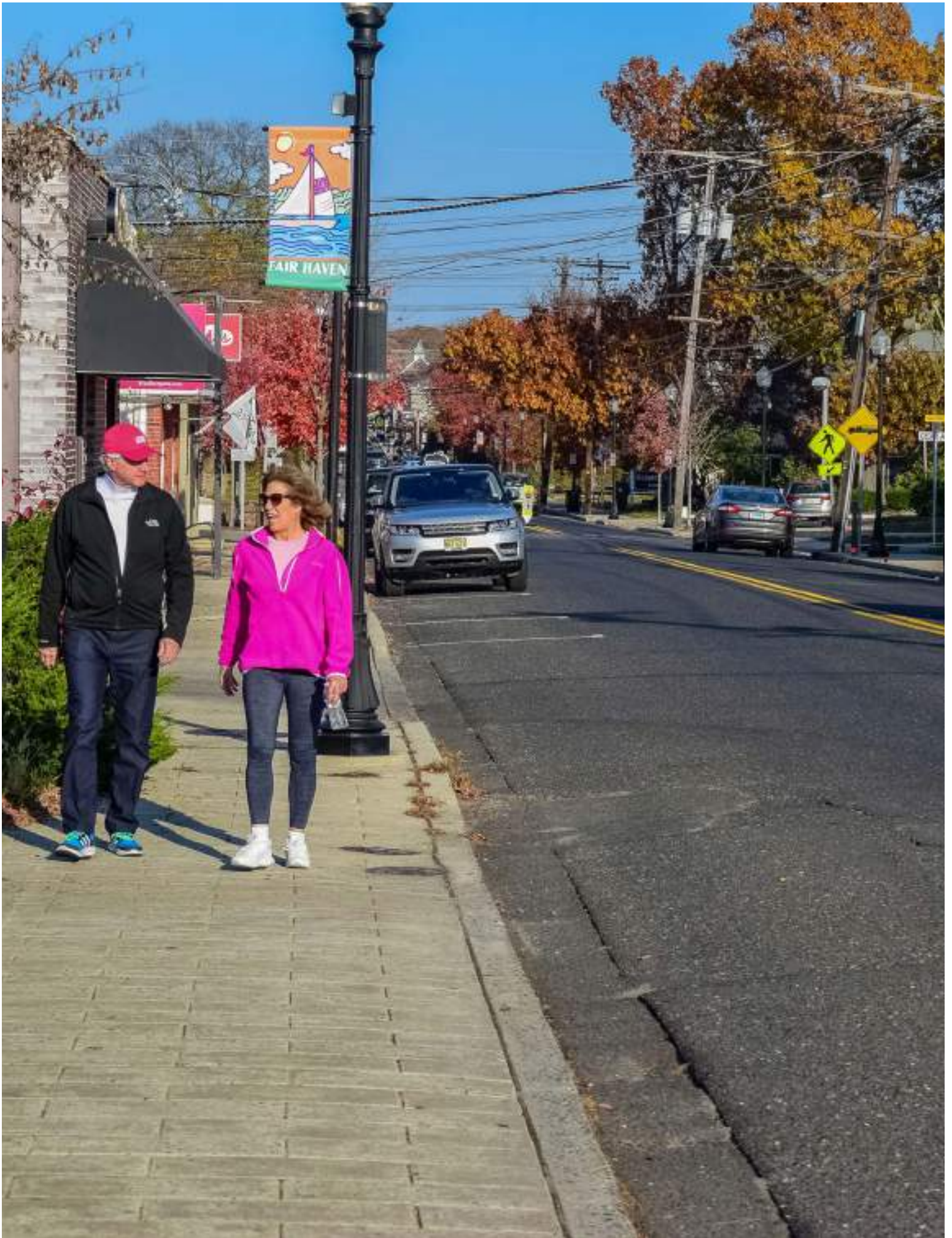
The Borough of Fair Haven has demonstrated a desire and commitment to make active transportation an integral part of the community, as illustrated by the hundreds of students who walk and bike to school every day. From its Complete Streets policy and Safe Routes to School programs to the implementation of bike lanes on Ridge Road, the Borough continues to seek opportunities to enhance safety, access, and mobility for those traveling by foot or by bike.

In the 2016 Master Plan Reexamination, Fair Haven residents identified bicycle and pedestrian improvements as the second highest priority to enhance their community's livability. More comfortable, convenient, and attractive conditions for bicyclists and pedestrians can enhance the vibrancy of the downtown, support local businesses, and improve health by encouraging more residents to choose active modes of transportation more often.

To support these objectives and continue to advance its Complete Streets policy, the Borough of Fair Haven has undertaken the development of an Active Transportation Plan as part of the New Jersey Department of Transportation's (NJDOT) Local Bicycle/Pedestrian Planning Assistance Program, which seeks to foster the development of non-motorized transportation modes in accordance with statewide goals and local needs.

This technical memorandum provides an overview of existing conditions for bicyclists and pedestrians in Fair Haven, including a review of the geographic and demographic context; previous studies, policies, and programs; key destinations and attractions; crash analysis; inventory of existing bicycle and pedestrian infrastructure; and a bicycle level of traffic stress (LTS) analysis.

Ultimately, the final Master Plan will include recommendations for improved facilities to enhance the overall bicycle and pedestrian network, as well as a suite of supportive programs and policies.



# 02 CONTEXT

## GEOGRAPHY AND TRANSPORTATION NETWORK

Fair Haven is a compact borough situated in northeastern Monmouth County along the Navesink River. At just over 1.5 square miles, Fair Haven is the 25th smallest municipality in Monmouth County by land area (out of 53). The Borough is bounded to the west by Red Bank, the south by Little Silver, the east by Rumson and the north by the Navesink River and Middletown Township. Fair Haven is considered fully built out with over 2,000 households, a business district, and various cultural and recreational destinations throughout the community. The Borough sits on a peninsula between the regional center of Red Bank and the Jersey Shore.

Two county routes traverse Fair Haven – CR 10 (River Road) and CR 34 (Ridge Road/Harding Road). These two roads provide the only continuous east-west corridors through the Borough and serve both local and regional trips. River Road provides access to the central business district of Fair Haven and is the busiest roadway in the Borough, with an average annual daily traffic (AADT) of nearly 12,000 vehicles (2015). Several north-south roadways, including Harrison Avenue, Hance Road, Fair Haven Road, Kemp Avenue, and Buena Vista Avenue, provide connectivity between CR 10/CR 34 and local residential streets.

The local street network provides varying degrees of connectivity for bicyclists, pedestrians, and motor vehicles. The eastern and northern neighborhoods tend to have more meandering alignments and cul-de-sac streets, while the

central and western neighborhoods tend to have a more traditional street grid pattern. Wetlands around Fourth Creek, McCarter Pond, Schwenker's Pond, and Shippees Pond create natural barriers that further limit connectivity options.

From a regional perspective, Fair Haven is also close to several major arterial roadways, including NJ Routes 35 and 36 and County Route 520 (Rumson Road), as well as the Garden State Parkway (Interchange 109), located approximately three miles west of the Borough.

In addition to roadway access, Fair Haven is served by the NJ TRANSIT 838 local bus route. This route runs through the Borough via River Road and provides connections to Red Bank, Brookdale Community College, Colts Neck, Lincroft, Freehold Borough, Freehold Raceway Mall, Rumson, and Sea Bright. Route 838 also connects the Borough to the North Jersey Coast Line commuter rail as well as NJ Transit bus routes 831, 832, and 834 via Red Bank and routes 67 and 836 via Freehold Raceway Mall. These crucial transit links effectively connect Fair Haven to regional destinations across northern and central New Jersey, as well as to New York City.

## DEMOGRAPHICS

As of 2015, Fair Haven has a total population of 6,075 and a population density of 3,797 people per square mile, nearly three times greater than Monmouth County as a whole. This combination of compact size and high density indicate significant opportunities for walking and biking to serve as convenient transportation options for trips within the Borough or for intermodal connections.

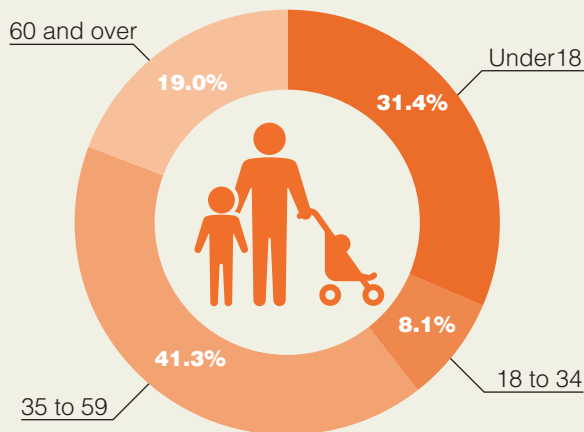
Fair Haven can be characterized as a residential, family oriented community. Approximately 31.4% of the population is below the age of 18, significantly higher than the average in Monmouth County or the state as a whole (17.4% and 16.7%, respectively). This finding highlights children as a critical segment of the population, and the need to ensure safe routes to schools, parks, downtown businesses, and connections among and between residential neighborhoods.

U.S. Census Journey to Work data (2014) indicates that 73.8% of Fair Haven residents

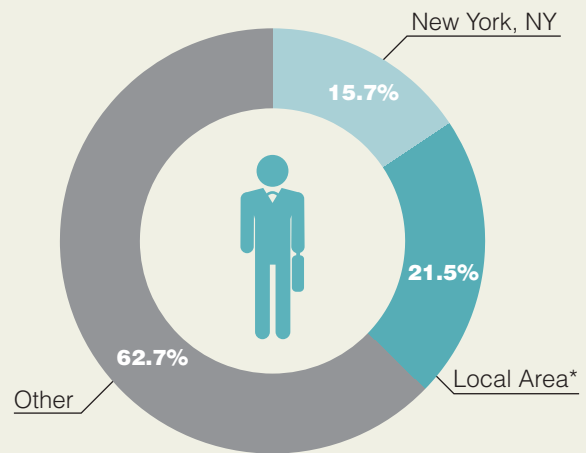
commute by car, truck, or van. Monmouth County and New Jersey have a slightly higher car dependence, with 83.1% and 79.9% of workers commuting by this mode, respectively. A significant number of residents also use public transportation (18.1%, compared to 8.0% in Monmouth County and 11.0% statewide). While this includes a large number of commuters who use more distant ferryboat services (7.4%), approximately 10.7% use nearby bus or commuter rail services, where walking or biking might be a convenient “last mile” connection to access a train station or bus stop.

Only 1.0% of residents currently report walking or biking as their primary means of commuting to work. However, approximately 38.3% of residents live within 10 miles of their place of work. Local employment areas include Red Bank (6.5%), Fair Haven (5.4%), Rumson (3.1%), and Shrewsbury Borough (2.6%). These short commutes provide additional opportunities for walking or biking.

**Age Distribution of Fair Haven Residents**



**Place of Work for Fair Haven Residents**



\* includes Red Bank, Fair Haven, Rumson, Shrewsbury, Tinton Falls, and Little Silver



## PREVIOUS STUDIES, POLICIES, AND PROGRAMS

The Borough, as well as jurisdictions that impact local transportation (NJDOT, Monmouth County, NJ Transit), have a variety of existing policies, programs, and previous studies relevant to the Bicycle and Pedestrian Master Plan. These programs and previous work support walking and bicycling initiatives and help inform and guide the planning process.

### COMPLETE STREETS

Fair Haven enacted a Complete Streets policy in the summer of 2012. This policy requires the Borough to include all modes of transportation in its future road projects, including pedestrians, bicyclists, public transit users, and motorized vehicles. Working in cooperation with Monmouth County and the State of New Jersey, which have both passed Complete Streets policies, these three levels of government are in a position to implement their policies and create a network of Complete Streets within Fair Haven's boundaries and connections to regional destinations.

### MASTER PLAN REEXAMINATION

Fair Haven adopted its most recent Master Plan in 1991. Since that year, the Borough has produced four reexamination reports, each of which is focused on determining whether the ideas and policy guidelines set within the original plan are still applicable. In addition to reviewing past policies, each reexamination also looks to providing direction for future planning and growth management. Fair Haven's original 1991 Master Plan had

little language regarding alternate modes of transportation. The plan acknowledged the high bicycling and walking rates of school children at Knollwood and Sickles Schools, but offered little in the way of viable solutions. The primary solutions at the time were focused more on street widening and less on the pedestrian and bicyclist realm.

The third Master Plan Reexamination, completed in 2005, offered the first language citing the need for bicycle and pedestrian network improvements. The document cited the need to address safety concerns along River Road to mitigate pedestrian and vehicular conflicts, as well as to devise a Circulation Plan within the Master Plan to identify specific areas in need of bicycle and pedestrian network improvements. The most recent Master Plan Reexamination, written in 2016, stressed these issues as still relevant. The 2016 reexamination reaffirms the Borough's concerns about pedestrian crossings, especially along River Road and Ridge Road. The document once again stressed the need for a Circulation Plan Element to address traffic safety, in addition to other modes of transportation.

In preparation for the 2016 reexamination, the Borough Planning Board conducted a survey of Fair Haven's land use and zoning opportunities and challenges. When asked about their number one priority for making Fair Haven a better place to live, the second most common response from respondents was pedestrian and bicycle circulation. Other relevant findings from the same survey include:

- » Respondents highly disliked the existing state of bicycle and pedestrian accessibility in the central business district

- » Over 50% of respondents stated that their children get to school via bicycle, while an additional 25% of children walk to school.
- » Two thirds of respondents indicated that they would walk or bike to local destinations more often if pedestrian and bicycle facilities were improved for safety and convenience.
- » While 88% of respondents typically drive to local destinations, walking and biking are popular alternatives, with 57% and 44%, respectively, of respondents also often using those modes
- » 6% are “not at all satisfied” and 33% are “partially satisfied” with the Borough’s pedestrian facilities
- » 21% are “not at all satisfied” and 34% are “partially satisfied” with the Borough’s bicycle facilities

### 3RD STREET / SRTS PROGRAMS

Fair Haven is an avid participant in the Safe Routes to School (SRTS) Program. The program is a national initiative designed to make routes safer for all children to walk and bicycle to school. Fair Haven has instituted numerous programs to help achieve this goal. As one of the Borough’s signature initiatives, 3rd Street between the Knollwood School and Fair Haven Road is closed to vehicular traffic during arrival and dismissal times in order to accommodate the large number of students who bicycle and walk to and from school. In addition, Fair Haven has had several police-sponsored bicycle rodeos at local schools to educate children on bicycle safety. As a supplement to these bicycle rodeos, Fair Haven police regularly hand out “tickets for good behavior” when a child is seen bicycling correctly. To help ensure safety, the schools require students to wear helmets, reinforced by a formal agreement signed by students and their parents. Finally, Fair Haven has a long-standing annual tradition called

“Transition Day”, during which graduating third graders at the Sickles School ride their bicycles to the Knollwood School where they will soon begin 4th grade, cheered on by faculty, parents, and the Fair Haven police department. These programs have all helped foster the bicycle culture that exists in the Fair Haven School District. The Sickles School was acknowledged for its work by the New Jersey Safe Routes to School Recognition Program in 2015.

### BICYCLE RECYCLING PROGRAM

Fair Haven residents participate in a program that provides lower income children with opportunities to own bicycles. As part of the its bulk waste collection program, the Borough gathers and donates used bicycles to Second Life Bikes, located in Asbury Park. The organization repairs them and distributes them to the local community or sells them at low cost. Fair Haven donates between 60 and 75 bicycles to Second Life Bikes each year. These donations are made on a monthly basis and help support the community. Participation in this program serves as a reminder that Fair Haven residents have a strong interest in bicycling.

### MAYOR’S CHALLENGE FOR SAFER PEOPLE, SAFER STREETS

Fair Haven joined the U.S. Department of Transportation (USDOT) 2015 “Mayor’s Challenge for Safer People, Safer Streets” initiative, one of only eight New Jersey municipalities to participate. The program focuses on advancing bicycle and pedestrian safety and accessibility goals by tackling one or more of the Challenge activities: implement

a Complete Streets approach, identify and fix barriers to safety and access, gather data on walking and biking, use context-sensitive design, create bicycle and pedestrian networks, improve safety laws, and educate and enforce proper road use behaviors by all.

## RED BANK BICYCLE/ PEDESTRIAN PLANNING PROJECT

Neighboring Red Bank completed a bicycle and pedestrian plan in 2010. Red Bank is a major regional destination for many Fair Haven residents. Therefore, connections between Fair Haven and planned facilities in Red Bank are an important part of developing a cohesive, continuous regional network. The Red Bank plan identified several proposed improvements and bicycle connections with Fair Haven, including:

- » Bicycle lanes on:
  - » Front Street (CR 10)
  - » Harrison Street
  - » Marion Street/McLaren Street
  - » Harding Street
- » Multi-use path on portion of Harding Street
- » Speed limit reduction on Front Street (CR 10) and portion of Harding Street

## MONMOUTH COUNTY BICYCLE FACILITY POLICY AND GUIDELINES

In April 2015, Monmouth County Freeholders adopted a resolution amending the Monmouth County Bicycle Facility Policy and Guidelines. Where possible, off-road, shared-use paths are encouraged. For on-road facilities, all bicycle facilities on county roads must follow AASHTO design guidance.



### MAP 1 - PLANNED PROJECTS

Fair Haven has several projects in various stages of planning and design related to bicycle and pedestrian improvements. These projects should be incorporated into infrastructure improvements identified within this plan. On-going projects, depicted in Map 1, include:

- 1** New sidewalk along Third Street eastbound, including ADA curb ramp improvements and crosswalk striping
- 2** New passive recreation space planned along the Navesink River, including at the end of Battin Road (boat ramp), Denormandie Avenue (park), and Grange Avenue and Hance Avenue (viewing vistas and waterfront pocket parks)
- 3** New sidewalk along Fair Haven Road northbound between McCarter Park and Linden Drive. Includes ADA curb ramp improvements, crosswalk striping, tightening the corner radii at Laurel Drive and Linden Avenue, and crosswalk striping and signage
- 4** New sidewalk on Cedar Avenue northbound between Fisk and Foreman Streets, including new curbing, ADA curb ramps, and crosswalk striping
- 5** Crosswalk improvements with decorative striping along River Road at the intersections with Oak Place, Denormandie Avenue, and Fair Haven Road



# 03 VISION AND GOALS

Public involvement is an essential component of the Fair Haven Bicycle and Pedestrian Master Plan. The planning process is intended to involve key stakeholders and the general public throughout the Plan's development. The community provided valuable input, insights, and feedback on existing conditions, areas of need, and improvement concepts, and shaped the goals and vision statement that ultimately guide the Plan. The result will be a plan that is reflective of the priorities and interests of the community and its residents, leading to broader support for implementation.

## COMMUNITY INVOLVEMENT ACTIVITIES

The project team is using several methods to engage the community throughout the planning process. The following sections summarize key community involvement activities.

### STUDY ADVISORY COMMITTEE

A local Study Advisory Committee (SAC) is providing input and guidance at key intervals during the planning process. The SAC includes representatives from Fair Haven's local government, engineering and public works, business association, school district, and residents; Monmouth County Division of Planning; and New Jersey Department of Transportation. The SAC met formally to review existing conditions, as detailed in this document, and will meet two more times during the duration of the project.

#### **Kick-off and Existing Conditions Review – January 31, 2017**

The SAC reviewed the results of the existing conditions analysis and provided input on key problem areas and deficiencies. The SAC also drafted the goals and vision for the Plan.

#### **Recommendations Review – July 31, 2017**

The project team presented the plan's draft recommendations. The SAC reviewed and discussed the initial concepts, provided feedback, and suggested several additions and modifications.

### PUBLIC EVENTS/MEETINGS

In addition to the SAC, the project team also sought input from the general public by participating in community events and holding public information centers (PICs). Events included:

#### **Trucktoberfest – October 29, 2016**

The project team staffed a booth during the community's Trucktoberfest event at Fair Haven Fields. The event was an opportunity for project staff to distribute project information and talk with members of the public early in the planning process about key issues and needs. Members of the public provided input via comment forms and marking-up a large map of the Borough, identifying problem areas and desired walking and bicycling routes.

**PIC #1 – April 27, 2017**

The project team held a PIC at Borough Hall from 5pm to 7pm. The PIC was an open-house format and included a series of boards summarizing the existing conditions analysis; a station for attendees to provide feedback on and prioritize the Plan's goals; and a station for attendees to mark-up a map of the Borough, identifying problem areas and desired walking and bicycling routes.

**PIC #2 – September 25, 2017**

The project team held a second PIC at Borough Hall from 5pm to 7pm to present the draft recommendations. The informal open-house included a series of boards summarizing study findings and illustrating the draft concepts. Attendees discussed the recommendations with the project team and provided feedback and suggestions.

**WIKIMAP**

An online “Wikimap” website (shown below) was launched in October 2016 to collect place-based comments about walking and biking in Fair Haven. Similar to hard-copy maps used at public events, the web interface allowed users to mark-up a virtual map of the Borough. Accessible to the general public, users were asked to identify corridors and spot locations that are difficult for walking and biking, desired walking and biking routes, and desired locations for additional bicycle parking.



*Over the course of the study, 91 unique users accessed the Wikimap site and provided a total of 25 comments on current issues and desired improvements*



*Clockwise from top:*  
*(1) Study Advisory Committee Meeting #1*  
*(2) Public Information Center #2*  
*(3-4) Public input at Trucktoberfest 2016*

## VISION AND GOALS

Developed collaboratively with the SAC, the Fair Haven Active Transportation Plan defines an aspirational vision for the future of active transportation in the Borough, and its role in community life.

### *Vision*

*Fair Haven is a model community for walking and bicycling, where these are convenient, comfortable, and safe transportation options for people of all ages and abilities. Traveling on foot or by bicycle is the natural, default choice for children going to school and residents and visitors traveling within the Borough. Active transportation supports a vibrant community, with a thriving business district and streets filled with people of all ages.*

To support this vision, the Plan seeks to achieve the following goals. The goals are listed in the order in which they were prioritized by attendees of the first public information center:

**Safety:** Improve safety and driver awareness of bicyclists and pedestrians through enhanced crossings, improved bicycle facilities, traffic calming, or other infrastructure improvements consistent with the local context and need

**River Road Complete Street:** Balance the needs of bicyclists, pedestrians, and motor vehicles along River Road to enhance access and support a bustling, vibrant local business district

**Comfort and Access:** Support a Borough-wide network for bicyclists and pedestrians that is comfortable for school children and provides convenient access between residential neighborhoods and schools, parks, and businesses

**Regional Connectivity:** Integrate Fair Haven's bicycle network with the regional network, supporting links to destinations in neighboring Red Bank, Rumson, Sea Bright, and Little Silver

**Education:** Communicate the rules of the road and promote safe travel habits for all modes

**Implementation:** Create a clear plan for integrated multimodal networks of safe travel options by foot or bike that can be easily communicated and shared with various constituencies, stakeholders, and partners, and that identifies a broad range of short and long term strategies



# BENEFITS OF WALKING AND BIKING

Active transportation provides many community-oriented and regional benefits:



## Transportation Equity

Bicycling and walking are more than recreation. They are a means of getting to work, running errands, and seeing friends, particularly for those that are too young to drive, unable to drive, cannot afford or choose not to own a car, or simply prefer not to drive. In most communities, 20%-40% of the population does not drive. Short trips of one mile or less can easily be made by bicycle or on foot, yet 60% of these trips are typically made by car.<sup>1</sup>



## Environmental Sustainability

Active transportation provides a greener, more sustainable alternative to driving. It has a reduced impact on roadways, both in terms of space consumed and infrastructure maintenance required. Shifts from driving to walking or bicycling can reduce vehicle miles traveled and congestion; fuel consumption; and emissions of CO<sub>2</sub>, CO, NO<sub>x</sub>, and VOCs.



## Public Health

Active transportation integrates physical activity into everyday life. This can lead to decreased rates of obesity, diabetes, heart disease, high blood pressure, and other ailments. Children who walk or bike to school, for example, have been found to be more attentive, better able to concentrate, and have mental alertness that is one-half school year more advanced than their less active counterparts.<sup>2</sup>



## Economic Vitality

An increase in bicycling and walking has a variety of positive economic impacts. Customers arriving by bicycle or by foot are more likely to shop locally, which is beneficial to the economic strength and stability of the community. Though spending less per trip than motorists, they tend to spend more over the course of a month.<sup>3</sup> Pedestrian infrastructure can also support a more vibrant community, boost property values and sales revenues, and spur private investment.



## Safety

Safety improvements are an essential component to encouraging more people to walk or bicycle. Investments in bicycle and pedestrian infrastructure also improve safety for all roadway users. High vehicle speeds can inhibit a driver's ability to react to activities happening along the roadway and narrow a driver's peripheral vision. Traffic calming enhancements reduce crash severity for all modes and create a more attractive environment for active transportation.

<sup>1</sup> National Highway Travel Survey, 2009

<sup>2</sup> Egelund, N. et al., Mass Experiment, 2012

<sup>3</sup> Popovich and Handy, Bicyclists as Consumers, 2014



# 04 EXISTING CONDITIONS

In order to guide the development of bicycle and pedestrian recommendations for Fair Haven, the project team first inventoried and analyzed existing conditions within the Borough related to bicycling and walking. This effort included identifying key destinations and activity centers, analyzing crash data, conducting a targeted sidewalk inventory, identifying key intersections and corridors, and examining the bicycling network and off-road paths.

## KEY DESTINATIONS

Locations that could attract a high number of pedestrian or bicycle trips were inventoried and mapped, as shown in Map 2. Key destinations were grouped into the following categories:

- » School – children walking or biking to school
- » Parks – many users, including children, bike or walk to recreational facilities
- » Municipal Buildings – library, post office, convention center, and other public facilities
- » Transit – many transit riders arrive at bus stops by foot or bike
- » Commercial – some shoppers arrive on foot or by bike. Others park nearby but still have to access the stores by foot.
- » Houses of Worship – community gathering spots that may attract residents from the surrounding neighborhoods







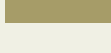
Two public schools are located within the Borough: the Viola L. Sickles School and the Knollwood School. These schools have a combined enrollment of over 1,000 pre-kindergarten to 8th grade students that reside in Fair Haven. High school students attend Rumson-Fair Haven Regional High School,

located in Rumson along Ridge Road (CR 34), approximately 1.1 miles east of the Borough. While not attended by Fair Haven residents, the Red Bank Regional High School is immediately adjacent to the Borough, located on the south side of Ridge Road (CR 34) in Little Silver.

In addition to the schools, there are a number of local destinations within the Borough. Commercial activity along River Road includes food establishments, grocery stores, convenience stores, banks, and other small businesses. In addition to commercial activity, Fair Haven boasts several outdoor recreational destinations, including the Fair Haven Playing Fields and Natural Area, Harding Bird Sanctuary, McCarter Park, Sportsman's Field, McCarter Pond Picnic Area, the Youth Center, and Fair Haven Yacht Works. Finally, the Borough is currently home to four places of worship, including the Fisk Chapel, the Church of the Nativity, the Christ United Methodist Church, and the Kingdom Hall of Jehovah's Witnesses.

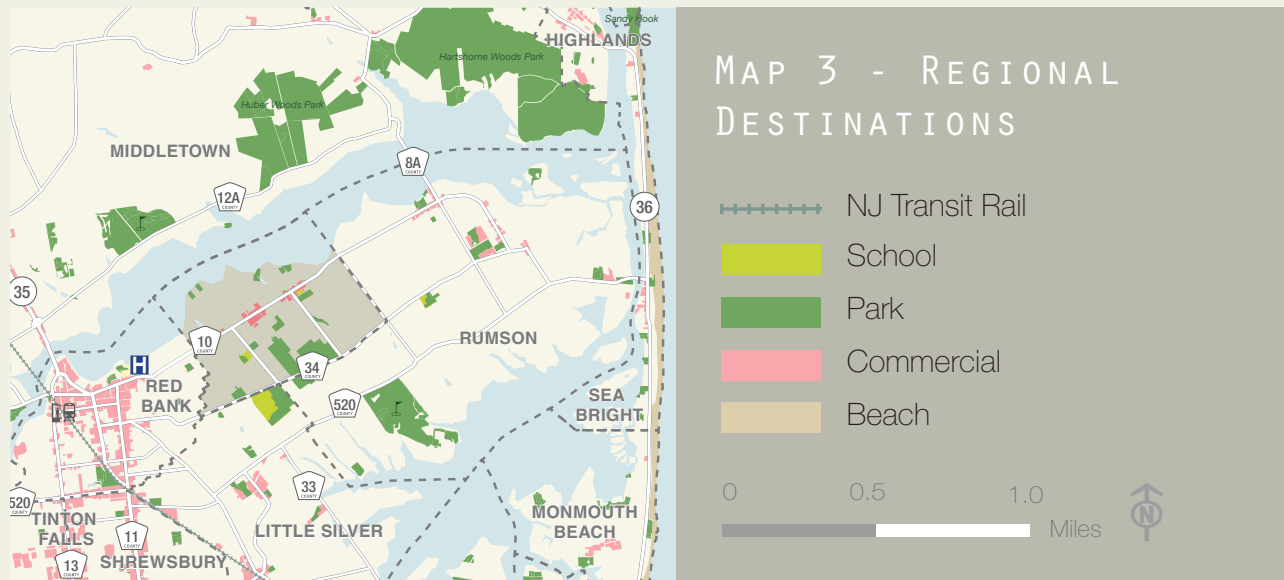


## MAP 2 - MAJOR DESTINATIONS

-  NJ Transit Bus Stop
-  NJ Transit Bus Route
-  School
-  Park
-  Commercial
-  Municipal Building
-  Place of Worship



*Fair Haven is a compact community covering 1.5 sq mi, making its schools, parks, and local businesses within easy walking or biking distance for most residents.*



In addition to local destinations within Fair Haven, there are numerous regional destinations in relatively close proximity to the Borough, as shown in Map 3. The Borough of Red Bank is a center of culture, business, healthcare, restaurants, and shopping. Red Bank is the closest regional destination to Fair Haven, offering specialized amenities and services. As of 2014, there were more than 11,500 employees commuting to work in Red Bank, 172 of them (1.5%) originating in Fair Haven. In addition to downtown Red Bank, there are commercial corridors along NJ 35, Newman Springs Road, and Broad Street, as well as commercial nodes and village centers in Little Silver, Rumson, and Sea Bright.

There are also several major parks and recreational destinations in the region. North of the Navesink, there is the Sandy Hook National Gateway National Recreational Area, Huber Woods Park, and Hartshorne Woods Park. To the east are the Jersey Shore beaches, a major seasonal destination. The Shrewsbury River Bridge, approximately three miles from Fair Haven, provides the most direct connection for all modes between the peninsula and the coast.

Finally, recreational cycling is popular within the region. Several routes traverse the peninsula and along the Navesink River, Shrewsbury River, and coastline. Popular routes include:

- » River Road (CR 10)
- » Ridge Road (CR 34)
- » Rumson Road (CR 520)
- » Seven Bridges Road (CR 33)
- » Bingham Avenue
- » Navesink River Road (CR 12A)
- » NJ Route 36

## CRASH ANALYSIS

Analysis of reported crashes can provide information related to existing safety issues, such as common crash locations or common crash characteristics and contributing factors. However, it is important to recognize the limitations of the data. Bicycle and pedestrian crashes are widely regarded as under-reported. Crashes that do not result in injury, have minimal property damage, or do not involve a motor vehicle are less likely to be reported to the police, where most crash data is collected and tracked.

Furthermore, a lack of reported crashes does not necessarily indicate a safe bicycling or walking environment. Perceived safety issues and conflicts with motor vehicle traffic are often indicated as the highest concerns that deter more people from bicycling or walking. Thus a road perceived as “unsafe” may have few actual reported crashes in part because few people choose to walk or bicycle along it.

Despite the known limitations, analysis of reported crashes can provide important insights. If a significant number of crashes in the same area were severe enough to be reported, it can indicate a potential safety issue and problem area for further assessment.

Between the years of 2011 and 2015, a total of eight crashes involving bicyclists or pedestrians were recorded in Fair Haven (NJDOT crash records). Three of the crashes involved bicyclists and five crashes involved pedestrians. One bicyclist fatality was documented, in addition to two minor to moderate injuries, while no serious pedestrian injuries or fatalities were reported. As shown in Map 4, all three bicyclist crashes occurred along River Road in the central business district, as did two of the pedestrian crashes. The remaining pedestrian crashes occurred on nearby Church Street, Ridge Road at Fair Haven Road, and another Cambridge Avenue at Harvard Road.

Due to the small sample size, few conclusions or statistics can be gleaned from the data. Of the eight crashes, alcohol played a factor in two, three crashes occurred in dark lighting conditions, six occurred at an intersection, and the victims were evenly split between males and females.

The single fatal crash involved a male bicyclist. The crash occurred at the intersection of Elm Place and River Road, within the business district of the Borough. Alcohol and poor lighting conditions were not contributing factors in the incident.



## MAP 4 - CRASH LOCATIONS

- Pedestrian Crash
- Bicycle Crash
- School
- Park
- Commercial
- Municipal Building
- Place of Worship



*Between the years of 2011 and 2015, there were eight reported crashes involving bicyclists or pedestrians in Fair Haven (NJDOT crash records)*

## SIDEWALK NETWORK

As part of the existing conditions analysis, the project team conducted an inventory of the pedestrian infrastructure along the core street network within the Borough. The streets included in this targeted inventory provide longer, continuous corridors across the Borough, create an interconnected network, and/or provide direct access to major destinations.

These roadways were examined for the presence of sidewalks and pedestrian crossing facilities (shown in Map 5). Each inventoried roadway was documented as having either no sidewalks, sidewalks on one side only, or sidewalks on both sides of the street. In addition to sidewalk connectivity, the project team also looked for deficiencies in the crossings linking the sidewalks. These deficiencies can include lack of curb ramps, lack of detectable warning surfaces, lack of crosswalk striping, or lack of accessibility to pedestrian push buttons at signalized intersections. These conditions can discourage walking, contribute to unsafe crossing conditions, reduce driver awareness and expectation of pedestrian activity, and/or create impediments to mobility for some residents.

Major roadways in Fair Haven that lack sidewalks include portions of Third Street,

portions of Fair Haven Road, Buena Vista Avenue, portions of Ridge/Harding Road, and portions of Kemp Avenue. Generally, neighborhoods in the eastern portion of the Borough and north of River Road often lack sidewalks or have significant network gaps, while sidewalk facilities are more common in the central and western neighborhoods of the Borough.

A significant number of roadways lack visible crosswalks at intersections and/or curb ramps are not ADA-compliant, including Hance Road, Kemp Avenue, Ridge/Harding Road, River Road, Buena Vista Avenue, Hendrickson Place, and Harrison Avenue. While a lack of marked crossings may be a lower priority at the intersection of low traffic, residential streets, the map illustrates a need for more marked and/or enhanced crossings along the more significant connector roadways. ADA-compliance issues are common and can range from a complete lack of a curb ramp to the simple absence of a textured warning surface to help alert the visually impaired.


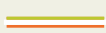
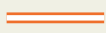
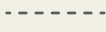
Improved crossings of River Road, as noted in the Master Plan Reexamination, would benefit the business district, better connect the neighborhoods to the north and south of the roadway, and improve access to parks and access points along the Navesink River.







## MAP 5 - PEDESTRIAN INFRASTRUCTURE INVENTORY

### Targeted Sidewalk Inventory

-  Sidewalk on 2 Sides
-  Sidewalk on 1 Side
-  No Sidewalk
-  Existing Path

### Targeted Crosswalk Inventory

-  Crosswalk Lacking ADA Compatibility
-  No Visible Crosswalk



*Sidewalk gaps and deficient pedestrian crossings indicate opportunities for improvements*

## BIKE NETWORK

### EXISTING FACILITIES

Fair Haven currently has just a single roadway with a designated bicycle lane, located on Ridge/Harding Road (CR 34) along the southern boundary of the Borough. Implemented by Monmouth County with support from the Borough, this bicycle lane was the first major road resurfacing project in Fair Haven since the adoption of the Complete Streets policy in 2012.

In addition to the Ridge/Harding Road bicycle lanes, there are several bicycle parking locations throughout the Borough. With approximately 50% of students bicycling to school, there is a high demand for parking. Accordingly, the largest bicycle parking capacity locations are located at the schools. Knollwood School currently has parking capacity for approximately 300 bicycles; 200 across Hance Road and 100 adjacent to the school. The Sickles School has capacity for approximately 120 bicycles, all located along Willow Street in front of the school. Two bicycle parking locations are located at the Fair Haven Playing Fields and Natural Area, each with a capacity of approximately 15. In addition, four businesses along River Road have small, comb-style bicycle parking facilities, each holding between one and five bicycles.

### BICYCLE LEVEL OF TRAFFIC STRESS

Bicycle Level of Traffic Stress (LTS) evaluates a cyclist's potential comfort level given the current conditions of the roadway. Different bicyclists have different tolerances for stress created by volume, speed, and proximity of automobile traffic. The LTS metric is based on the Dutch concept of low-stress bicycle facilities and has proven influential in the advancement of bicycle planning in the United States.

In general, lower stress facilities have increased separation between cyclists and vehicular traffic and/or have lower speeds and lower traffic volumes. Higher stress environments generally involve cyclists riding in close proximity to traffic, multi-lane roadways, and higher speeds or traffic volumes.

Four levels of traffic stress were used to evaluate the roadways of Fair Haven:

**Level of Traffic Stress 1:** The level most users can tolerate (including children and seniors)

**Level of Traffic Stress 2:** The level tolerated by most adults

**Level of Traffic Stress 3:** The level tolerated by "enthusiastic" riders who might still prefer dedicated space

**Level of Traffic Stress 4:** The level tolerated by the most experienced riders



MAP 6 - EXISTING BICYCLE FACILITIES

**Facility Type**

- Bicycle Lane
- Unpaved Path

**Number of Bicycle Parking Spaces**

- 1 - 5
- 6 - 20
- > 20



*There is one existing 1.9-mile bike lane in Fair Haven along Ridge Road (CR 34)*



## MAP 7 - BICYCLE LEVEL OF TRAFFIC STRESS

- Level of Stress 1
- Level of Stress 2
- Level of Stress 3
- Level of Stress 4



*River Road (CR 10) and Ridge Road (CR 34) create the primary barriers for low-stress bicycle riding in Fair Haven*

**Figure 4.1 - LTS 1 Network**

While the majority of Fair Haven's roadway network is LTS 1, as shown to the right, it is fragmented by higher stress roadways, creating "islands" of low stress roadways, such as north of River Road (circled in orange).



The LTS was evaluated for all roads in Fair Haven. The project team assessed major roadways and key minor roadways in the study using a variety of data sources, including base mapping, GIS data files, NJDOT Straight Line Diagrams, and traffic data from NJDOT. The team also conducted field evaluations to take measurements and verify the various roadway features, character, parameters, and user behavior. For many of the local roads in the study area, basic assumptions were made of their typical characteristics.

The majority of the streets in Fair Haven are residential streets with low traffic speeds and volumes, making them LTS 1 roadways that are accessible for all users. There are four roadway segments that are classified LTS 2, including portions of Buena Vista Avenue, Fair Haven Road, Third Street, and Hance Road. These roadways have higher traffic volumes and more frequent turning movements.

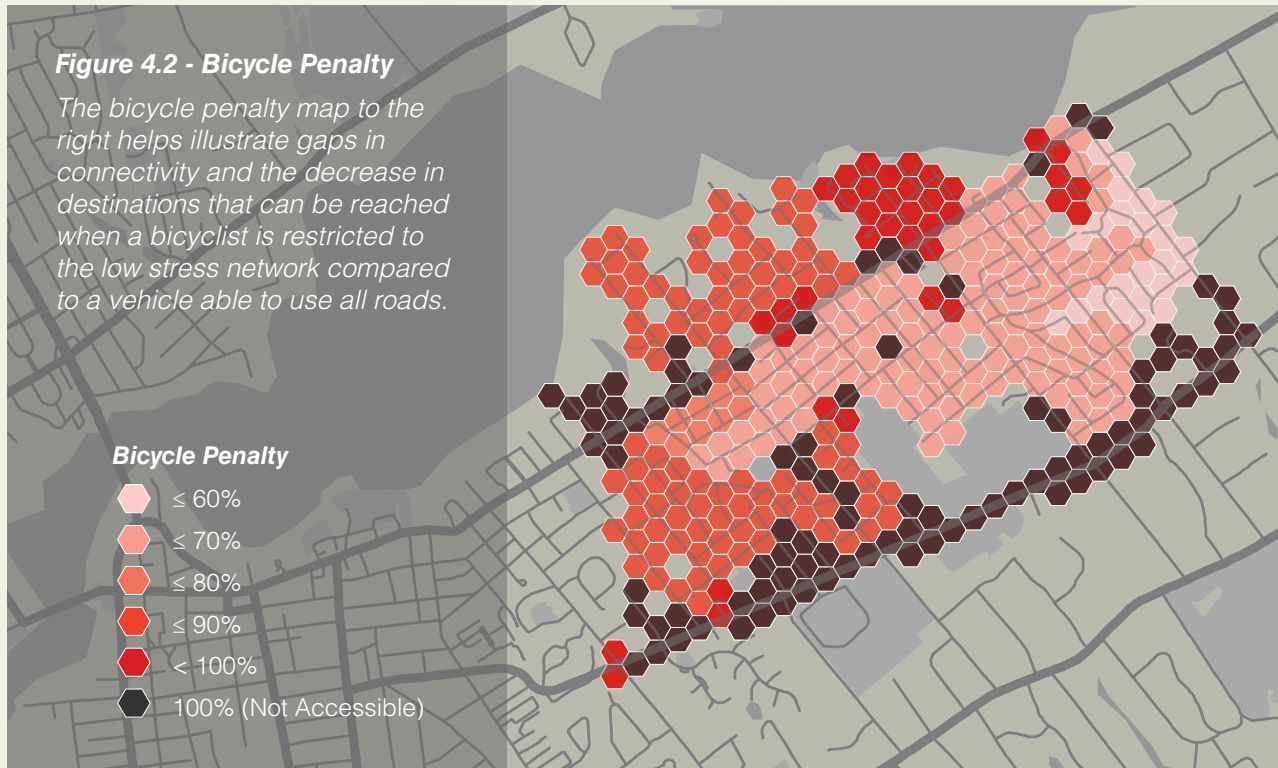
The high stress (LTS 3 and LTS 4) roadways within Fair Haven include the higher speed and/or higher volume county roadways – River Road and Ridge/Harding Road. While

Ridge/Harding Road has an existing bicycle lane, it is perceived as a higher stress roadway for most cyclists due to its 35 MPH speed limit.

From the perspective LTS 1 cyclists, such as children bicycling to school, Fair Haven has a large number of LTS 1 roadways. However, several key gaps create low stress "islands" with limited connectivity between them. River Road, for example, is a barrier between residential neighborhoods to the north and points south, while Ridge Road is a barrier to major destinations to the south such as the Regional High School. Similarly, the main north/south roads (Hance Road and Fair Haven Road) are LTS 2 roadways, and there are no LTS 1 roadways that provide a continuous connection across the Borough. While Third Street is considered an LTS 2 facility during most of the day, its closure to vehicular traffic makes it an LTS 1 roadway during the peak periods of school arrival and dismissal, effectively filling a network gap and providing an east/west conduit connecting residential neighborhoods and the schools.

**Figure 4.2 - Bicycle Penalty**

The bicycle penalty map to the right helps illustrate gaps in connectivity and the decrease in destinations that can be reached when a bicyclist is restricted to the low stress network compared to a vehicle able to use all roads.



## BICYCLE PENALTY METRIC

In order to better understand the bicycle network connectivity in Fair Haven, a technique called Bicycle Penalty was used. The guiding principle behind this analysis is that high stress links in a bicycle network can penalize and hamper bicyclists' ability to access the entire network when compared to an automobile. The analysis works by measuring the percent difference in the ability of a user at one point in the network to access any other point in the network. The analysis compares a user in an automobile, where the entire network is available, to a user on a bicycle who can only use LTS 1 roads (shown in Figure 4.2).

The Bicycle Penalty measurement is expressed on a percentage scale from 0 to 100 percent, which indicates, at a given point, the percentage of the network that is accessible by car but not by bike. For example, a Bicycle Penalty of 60 percent

indicates that a bicyclist from that point can access 60 percent less of the network compared to a motorist.

Figure 4.2 shows the Bicycle Penalty for a bicyclist using only LTS 1 road and limited to a two-mile trip distance. Areas of the Borough shown to have a high Bicycle Penalty, indicate that there is a lack of connectivity between LTS 1 routes, which limits the mobility of these users, who are often children.

As shown in the figure, the southern edge of the Borough and northwest corner, as well as several locations dispersed throughout, are not accessible via low stress roadways. Additionally, the neighborhoods north of River Road are relatively isolated and difficult to navigate for LTS 1 bicyclists compared to motorists. This is largely due to the high stress barrier effect of River Road.

The western neighborhoods also have a relatively high Bicycle Penalty due to the classification of Hance Road and Third Street

as LTS 2 roads, which otherwise provide a direct connection to the eastern side of the Borough. These findings are consistent

## OFF-ROAD PATHS

The Fair Haven Playing Fields and Natural Area contain a network of walking paths. While these paths enhance north/south pedestrian connectivity and access to the parks, they are unpaved and predominantly serve a recreational purpose.

Several auxiliary paths enhance linkages between the park and surrounding residential streets. The path network is accessible from Third Street, Fair Haven Road, McCarter Avenue, William Street, and Ridge Road, in addition to the primary park entrance located off of Gentry Drive.

## SCHOOL ACCESS

Walking and biking to school remains an important part of the school culture in Fair Haven. As discussed in Chapter 2, the Borough has several Safe Routes to School programs and initiatives to promote and facilitate walking and biking, and approximately 75% of students walk or bike to school (2015 Master Plan Re-evaluation survey). Key infrastructure related programs include the closure of Third Street to vehicular traffic during school arrival and dismissal times, and stationing of crossing guards at major intersections throughout the community.

The field inventory identified several existing deficiencies and issues that impact safe routes to schools, including:

- » Sidewalk gaps along Fair Haven Road, including between Third Street and McCarter Park
- » Sidewalk gaps along Third Street
- » Worn crosswalk striping and lack of ADA-compliant curb ramps at intersection of Third

with feedback heard during the community involvement process.

In addition to the park trails, there is a multi-use path located adjacent to the Knollwood School that connects Oxford Avenue with the school. This path allows students and parents to avoid vehicular congestion in front of the school by accessing it through a car-free path.

The off-road path network is intended primarily for pedestrians, typically unpaved, and is generally self-contained within the parks, providing limited value to the larger bicycle network and bicyclists traveling across the Borough.

### Street and Fair Haven Road

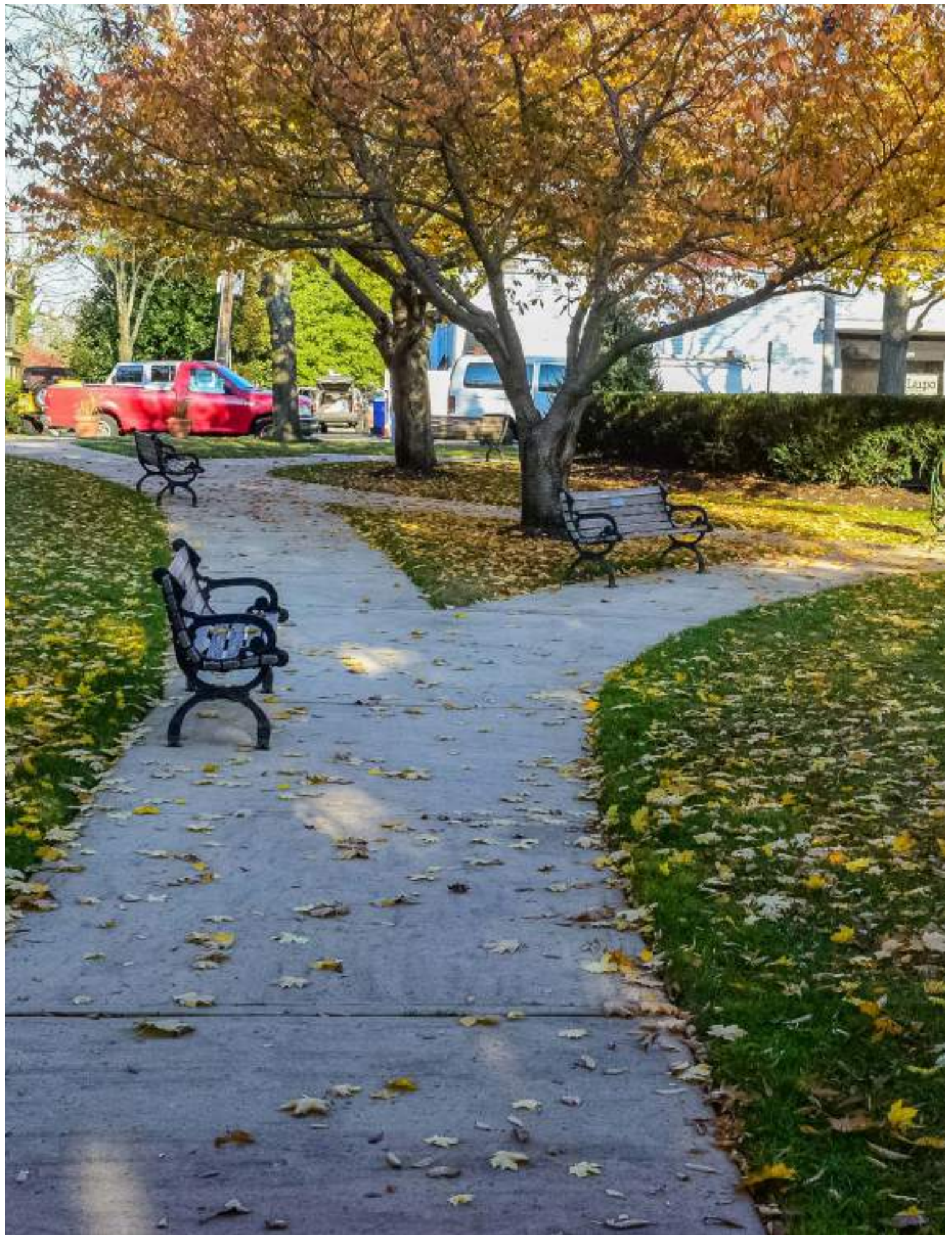
- » Unlike the elementary and middle schools, Rumson-Fair Haven High School (RFHHS) is located approximately one-mile east of the Borough in Rumson, making it less convenient for walking to school, but within easy bicycling distance. Ridge Road is the primary connection between Fair Haven and the RFHHS. This is a high-stress corridor for bicycling due to the high traffic speeds (40 mph) and variable shoulder width. The existing bicycle lanes do not extend into Rumson. The corridor also lacks sidewalks.
- » Lack of sidewalk along Ridge Road eastbound adjacent to the Red Bank Regional High School (RBRHS). A heavily worn path indicates high pedestrian demand.
- » Signalized intersection of Hance Road at Ridge Road lacks pedestrian accommodations, such as curb ramps, pedestrian signal heads, and striped crosswalks. This intersection provides an opportunity for a signalized crossing of Ridge Road for students walking to RBRHS.

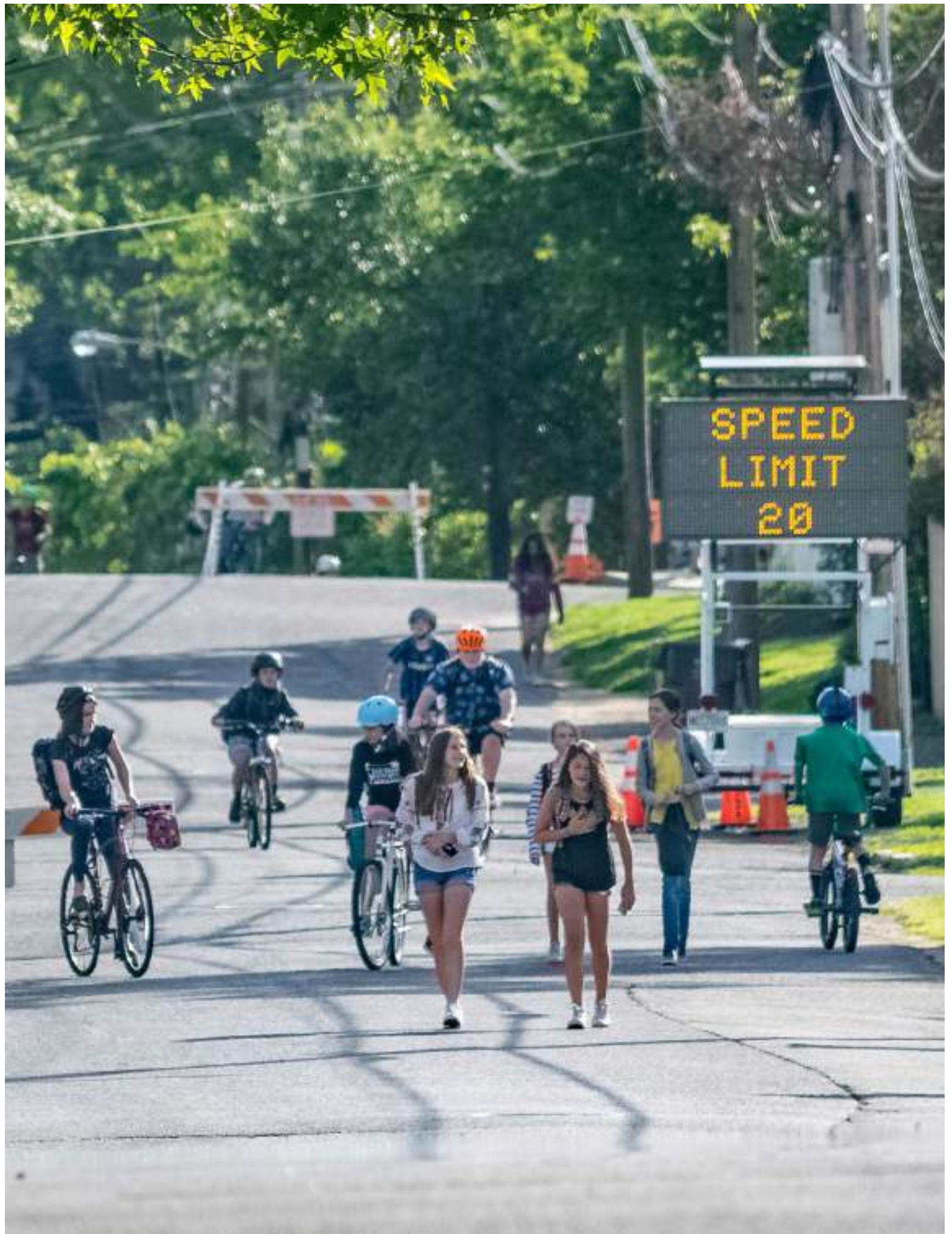
## KEY CORRIDORS AND SUMMARY

As a result of the existing conditions analysis, public input, and review of previous studies, several key corridors, issues, and themes were identified that guide the development of improvement recommendations. These include:

- » Fair Haven's compact size, relatively high density, and proximity of schools, parks, and the downtown to neighborhoods are conducive to convenient walking and biking trips
- » The majority of students typically walk or bike to school. Children are a key user group and improvements should enhance access to schools
- » Connections to regional destinations, including Red Bank and the Shore are important
- » Key corridors include: River Road, Ridge Road, Hance Road, Fair Haven Road, Third Street, Kemp Avenue, and Buena Vista
- » Sidewalk gaps and lack of enhanced pedestrian crossings are common issues on some the key corridors
- » Ridge Road and River Road are the primary high traffic stress roadways within the Borough, which create barriers to low stress network connectivity
- » Speeding was cited as a common issue on some of the Borough's main roadways







# 05 PEDESTRIAN IMPROVEMENT CONCEPTS

Based upon the existing conditions analysis, feedback from the Study Advisory Committee, and public input, the proposed pedestrian improvement concepts for Fair Haven identify targeted opportunities to improve pedestrian comfort, access, and safety. The recommendations outlined in this chapter include general design principles applicable to the Borough, expansion of the sidewalk network, pedestrian crossing enhancements, and River Road corridor improvements.

The proposed improvements are intended as conceptual recommendations that would likely require varying levels of design or further analysis, depending on the magnitude of the improvement. Many concepts are intended to be easily implementable and emphasize low-cost options, where applicable, such as restriping of existing roadways or enhanced signage.

Projects may be implemented over time as funding allows. The recommendations may be used to support grant applications, integrate pedestrian projects into the capital improvement pipeline, and/or incorporate pedestrian improvements into routine roadway maintenance and resurfacing projects or development activity

to minimize additional costs.

The recommendations are also summarized in an implementation matrix in Appendix A2. Where practical, order-of-magnitude cost estimates are included for each improvement based on average material rates for sidewalks, crosswalks, striping, etc. These estimates are intended to convey the level of investment that proposed concepts would require for implementation. The cost estimates are based on industry standards for per-unit material costs, and do not include the cost of right-of-way acquisition, relocation of utilities or drainage that could be involved, engineering design, or contingencies.

## PEDESTRIAN DESIGN ELEMENTS

Proposed improvements in Fair Haven are generally located near major destinations (e.g., River Road commercial corridor, near schools, or at/along major roadways). However, many of the concepts include common design elements that may also be applicable elsewhere in the Borough and could be incorporated into other roadway improvement projects as opportunities arise. Pedestrian design elements applicable throughout Fair Haven include:

- » Enhanced pedestrian crossings
- » Traffic calming

The following sections briefly summarize key elements of these pedestrian treatments. As the Borough implements various roadway projects, pedestrian facility design should refer to current best practice guidance for more detailed information, including:

- » *New Jersey Complete Streets Design Guide*
- » *NACTO Urban Street Design Guide*
- » *FHWA Small Town and Rural Multimodal Networks*
- » *AASHTO Guide for the Planning, Design, and Operation of Pedestrian Facilities*

## ENHANCED PEDESTRIAN CROSSINGS

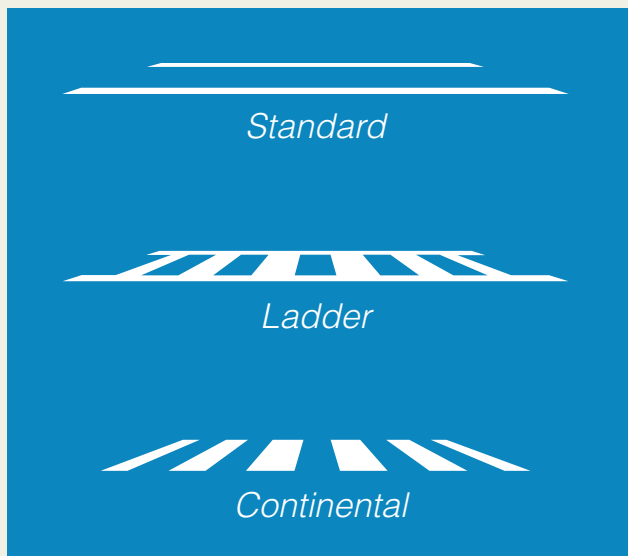
Based on the surrounding context, traffic volumes, and traffic speeds, enhanced pedestrian crossings may utilize a variety of design elements to improve pedestrian visibility, enhance user comfort, increase driver compliance with the State’s “stop for pedestrians” law, and/or decrease the crossing distance for pedestrians.

On low volume and low speed roadways, crosswalk striping alone is often sufficient. However, on higher volume and/or higher speed roadways, additional pedestrian treatments are recommended to enhance the crossing and supplement crosswalk striping.

Key corridors in Fair Haven that would benefit from enhanced pedestrian crossings include:

- » River Road
- » Hand Road
- » Fair Haven Road
- » Ridge Road
- » Third Street

Elements of an enhanced pedestrian crossing may include:



### High Visibility Crosswalk Striping

Striping design can significantly enhance the visibility of a crosswalk. Transverse striping, typically a pair of parallel lines oriented perpendicular to the driver, has a very limited visual profile to motorists. Conversely, longitudinal striping (often referred to as “continental” striping) is oriented parallel to motor vehicle travel, which significantly improves the visibility of the crossing to motorists. Typical types of crosswalk striping are illustrated below.

Pavers or stamped brick crosswalks are often incorporated into downtown streetscape designs. While these designs may provide additional aesthetic value consistent with an overall streetscape program, they generally do not have the same visibility benefits as the continental striping due to the low color contrast between the pavers and the asphalt. If the brick aesthetic is preferred, it can be combined with higher visibility striping patterns to enhance visibility, as shown in the example below.



Left: Typical crosswalk striping designs

Above: Example of incorporating high-visibility striping with brick/paver material aesthetic ([www.atlanticpaving.com](http://www.atlanticpaving.com))

### Pedestrian Crossing Signage and Beacons

Signage can further enhance the visibility of a pedestrian crossing and reinforce driver compliance with the State's stop for pedestrian law. Signage options include in-road "Stop for Pedestrian" (MUTCD R1-6a) and pedestrian crossing (W11-2) signs. Both options improve motorist awareness of the crossing and their obligation to stop for pedestrians.

Crossings with higher vehicle speeds, higher vehicle volumes, or a higher volume of pedestrians may also be suitable locations for beacons. Pedestrian-actuated rectangular rapid flashing beacons (RRFBs) further improve the visibility of the crossing by combining signage with flashing amber LED lights.



*Examples of in-road "Stop for Pedestrian" (left) and pedestrian crossing signage already used in Fair Haven to enhance pedestrian crossings*

### Integrating Public Art into the Streetscape

*Community crosswalk programs provide opportunities to integrate public art into the streetscape. They engage the creativity of local residents to design crosswalks or paint an entire intersection as a way to encourage community building and transform public roadway space into neighborhood assets. Designs must abide by requirements of the MUTCD or other regulating standards related to paint color and patterns, and should follow the principle of using high-contrast to enhance visibility and improve safety. Community crosswalk programs have been implemented in municipalities across the U.S., such as Ocean City, NJ; Fort Lauderdale, FL; and Seattle, WA.*



*(clockwise from top right) Residents installing a painted intersection in Boulder, CO ([www.bouldercolorado.gov](http://www.bouldercolorado.gov)); painted intersection in Ft. Lauderdale, FL ([www.fortlauderdale.gov](http://www.fortlauderdale.gov)); colorful crosswalk in Silver Springs, MD ([www.montgomeryplanning.org](http://www.montgomeryplanning.org))*



*Daylighting treatments can include the use of quickly implementable, inexpensive materials in order to shorten crossings, improve visibility, and slow traffic, such as the example to the left from Hoboken, NJ. They can be used as an interim treatment until a permanent curb extension is installed, or maintained longer term in order to permit more flexible use of the street.*

### Intersection Daylighting

Daylighting an intersection refers to improving the visibility of a crossing by removing obstacles that could obstruct the vision of either the pedestrian or approaching motorists. On-street parking too close to an intersection (i.e., closer than 20 feet, per design standards), for example, is a common obstruction to visibility.

Daylighting treatments range from short-term installations that are removed seasonally, to pilot projects that demonstrate a design concept, interim treatments until a long-term improvement can be implemented, or permanent, raised curb extensions.

Short-term or interim daylighting treatments can utilize low-cost, quickly implementable materials to reinforce the clear zone around a pedestrian crossing and deter parking or loading. This serves to improve safety by enhancing visibility, reducing the crossing distance, and calming traffic. Elements include a surface treatment to define the space, such as striping, paint, or epoxy gravel coating. A vertical element, such as flexible delineators, bollards, or planters, deters vehicles from entering the space and narrows the crossing. A bicycle corral (discussed on page 82) can also serve as

the vertical element in a daylighting scheme, providing an opportunity to expand bicycle parking as well as improving the pedestrian crossing.

Long-term solutions involve installing a curb extension. This extends the sidewalk and streetscape into the parking lane and/or narrows the travel lane. In addition to improved visibility and safety, curb extensions also provide an opportunity to integrate green stormwater management strategies and/or enhance the streetscape with street furniture, plantings, or other amenities.

### TRAFFIC CALMING

Traffic calming strategies aim to reduce motor vehicle speeds. Lower speeds support a more bicycle- and pedestrian-friendly environment by reducing instances of vehicles overtaking bicyclists, enhancing the drivers' ability to see and react to bicyclists and pedestrians, and reducing the severity and likelihood of crashes for all street users. Reducing vehicle speeds also improves bicyclist comfort by reducing the speed differential between motor vehicles and bicyclists, and is a critical element of a bicycle boulevard.



*Different traffic calming design elements and strategies can be used in combination to improve their effectiveness as part of a comprehensive program. The above example from a residential street in Princeton, NJ, includes: (left) Raised intersections, helping both calm traffic and enhance pedestrian crossings. (center) Median islands, which calm traffic by narrowing the travel lane. Median islands are a versatile treatment, ranging from a cobblestone island that can be easily mounted by vehicles (as shown in the photo) to a raised curb island with street trees or other features. (right) Neighborhood roundabouts, which also narrow travel lanes and tighten turning radii at intersections to reduce traffic speeds. Other treatments used in the neighborhood include neckdowns (midblock curb extensions to narrow the roadway) and speed humps.*

Benefits of traffic calming techniques include:

- » Decreased motor vehicle speeds
- » Decreased crash likelihood and crash severity for all street users
- » Improved bicyclist and pedestrian comfort
- » Improved conditions for pedestrians and residents by reducing vehicle speeds
- » Establishes and reinforces bicycle priority on bicycle boulevards
- » Provides opportunity for landscaping and other community features, such as benches, communal space, and artistic painted intersections, benefiting all roadway users and residents

In Fair Haven, traffic calming is particularly applicable to River Road, Hance Road, and Fair Haven Road, as well as other streets with recommended shared-lane markings or bicycle boulevards as a part of the proposed bicycle network (discussed in Chapter 6).

Speed management treatments can be divided into two types: horizontal and vertical deflection. These treatments can be

implemented individually or in combination to increase their effectiveness. Examples of traffic calming strategies are described on the following pages and the case study above.

As with all roadway features, traffic calming elements should be designed to consider the context and needs of the street.

Enhanced signing strategies can also support lower traffic speeds. Radar speed signs or driver feedback signs, for example, alert drivers of their speed and the actual speed limit. These relatively low cost, easily implementable tools have been shown to have a moderate impact on reducing 85<sup>th</sup> percentile speeds, and a significant impact on reducing high-end speeds – those exceeding the speed limit by 10 MPH or more (*Spotlighting Speed Feedback Signs*, Public Roads/FHWA, 2016). These devices may be used as part of a gateway treatment along River Road approaching the business district, or along Hance and Fair Haven Roads.

## Horizontal Deflection

Horizontal speed control devices are used to slow motorists by either visually narrowing the roadway or deflecting motorists through an artificial curve. Where possible, sufficient space should be provided for bicyclists to pass around the outside of the elements. The following are examples of horizontal deflection:

### *Curb Extensions*

Curb extensions, or bulb-outs, extend the sidewalk or curbface into the parking lane at an intersection. Curb extensions narrow the roadway at intersections, contributing to lower motor vehicle speeds, as well as reducing the crossing distance for pedestrians and increasing the amount of space available for street furniture and green stormwater management features. They are typically applied at locations with on-street parking and should not extend into bicycle lanes.



### *Chicanes*

Chicanes are a series of raised or delineated curb extensions, edge islands, or parking bays that are placed on alternating sides of a street to create an S-shaped bend in the roadway. Chicanes reduce vehicle speeds by requiring drivers to shift laterally through narrow travel lanes.



### *Neighborhood Roundabout*

Neighborhood roundabouts, or mini roundabouts, are raised or delineated islands used at minor street crossings to reduce vehicle travel speeds by reducing turning radii, narrowing the travel lanes, and, if planted, obscuring the visual corridor along the roadway.





## Vertical Deflection

Vertical speed control measures are composed of wide, slight changes in pavement elevation that self-enforce a slower speed for motorists. Narrow and abrupt speed bumps that are often used in private driveways and parking lots are not recommended for public streets and are hazardous to bicyclists.

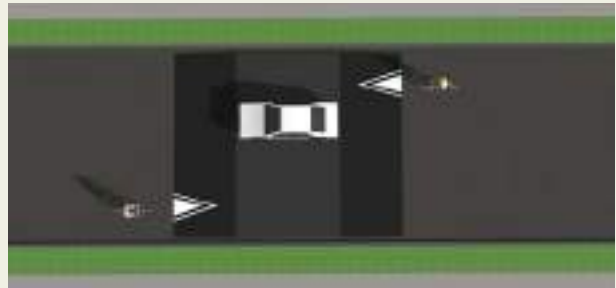
### *Speed Humps*

Speed humps are 3 to 4 inches high and 12 to 14 feet long, with an intended vehicle speed of 15 to 20 mph. Speed hump design should adhere to the guidelines of the New Jersey “Speed Hump Law,” (C.39:4-8.9, C.39:4-8.11), which adopted the ITE design standards for speed humps.



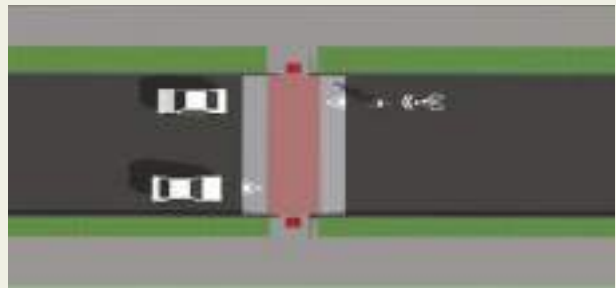
### *Speed Tables*

Speed tables are longer than speed humps and have a flat top, with a typical height of 3 to 3.5 inches and a length of 22 feet. Intended vehicle operating speeds range from 25 to 35 mph, depending on the spacing. Speed tables may be used on collector streets, transit, and/or emergency responder routes.



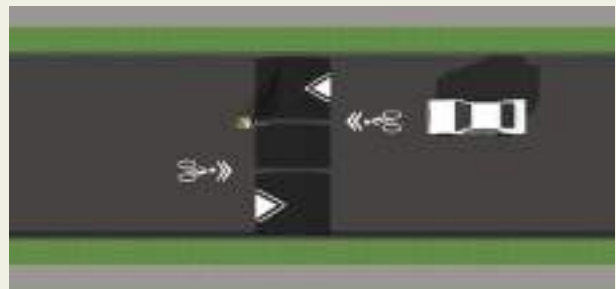
### *Raised Crosswalk / Raised Intersection*

A raised crosswalk is a speed table that is signed and marked as a pedestrian crossing. It extends the full width of the street and is typically 3 inches high. At minor intersections the entire intersection can be raised to reduce motor vehicle speeds in all directions.



### *Speed Cushions*

Speed cushions are speed humps that include wheel cutouts that allow larger vehicles to pass unaffected, but reduce passenger vehicle speeds. They are often used on key emergency response routes to allow emergency vehicles to pass unimpeded. Speed cushions should be used with caution, however, as drivers will often seek out the space in between the humps.



## SIDEWALK NETWORK

Sidewalk improvements should be targeted where they are needed most and should also take into account the character of Fair Haven's neighborhoods. Many neighborhood streets in the eastern and northern parts of the Borough, for example, have little existing sidewalk, but also very little traffic, making dedicated pedestrian space less essential.

Based on the targeted sidewalk inventory conducted during the existing conditions analysis, opportunities were identified to expand the sidewalk network. Projects can be prioritized based on:

- » proximity to major destinations (e.g., walking routes to schools, parks, or downtown)
- » whether the street is a primary roadway within the Borough, carrying relatively high traffic speeds and/or volumes, thereby increasing the need for pedestrian facilities

Given these criteria, the map on the following page identifies sidewalk gaps as higher priority or lower priority. Projects generally seek to fill smaller gaps and gaps on one side of a street first, and complete both sides of the street over the longer term. Where possible, priority projects also seek avoid utility or right-of-way constraints.

Several of these priority sidewalk links are already being addressed by the Borough, including 3rd Street and portions of Fair Haven Road. Future sidewalk improvements

should also be implemented and required as a part of redevelopment projects.

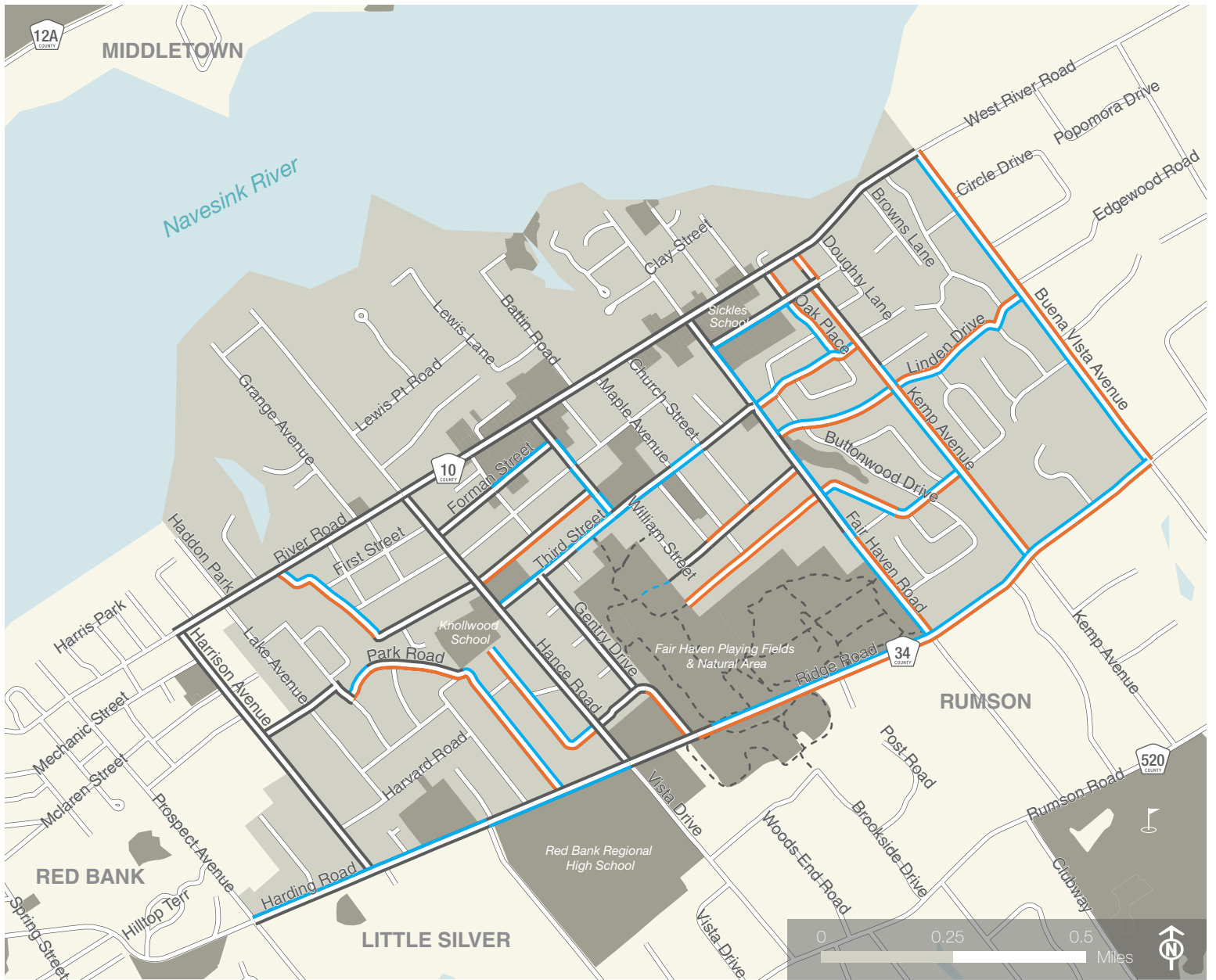
New sidewalks should have a typical minimum width of five feet, which is generally sufficient for most residential neighborhoods. Where space is available, a wider width may be preferred in areas with greater pedestrian activity, such as improvements along the River Road commercial corridor or in the vicinity of schools or parks. Where right-of-way allows, a planting strip between the sidewalk and curb should also be considered to provide an additional buffer between pedestrians and the roadway, which is typical of much of the existing sidewalk network in Fair Haven.

During sidewalk construction, curb ramps compliant with the Americans with Disabilities Act (ADA) must also be constructed to ensure the sidewalk network is accessible for everyone, including seniors, children, families with strollers, and those in wheelchairs or with other mobility impairments.

At driveway crossings, design should make it clear and intuitive that the pedestrian has the right-of-way. As illustrated in the images below, the sidewalk should extend through the driveway. A continuous, level sidewalk, requires the vehicle to cross at sidewalk grade, prioritizing pedestrian movement and encouraging turning motorists to stop for pedestrians.

### *Sidewalks and Driveway Design*





## MAP 8 - TARGETED SIDEWALK NETWORK IMPROVEMENTS

- Existing Sidewalk\*
- Existing Path
- New Sidewalk - Higher Priority
- New Sidewalk - Lower Priority
- New Path

\*Map does not reflect the existing sidewalk network Borough-wide, but only existing sidewalk on roads included in the targeted field inventory



*Continuing to expand the sidewalk network will improve pedestrian safety and access to key destinations in the Borough*

## PRIORITY INTERSECTION IMPROVEMENTS

Based on the results of field observations, data analysis, and stakeholder input, as detailed in the existing conditions section, pedestrian improvement recommendations were developed for several targeted intersections within the Borough. Generally, these locations are crossings of main roadways and are located near, or along walking routes to, major destinations. Recommendations for these targeted locations may also serve as templates to help guide future improvements elsewhere in the community.

The improvement concepts reflect state-of-the-practice guidance (i.e., NJDOT, NACTO, AASHTO, FHWA), and are consistent with both statewide and national standards for multimodal safety and mobility through implementation of Complete Streets principles. For each location, an aerial view is shown depicting recommendations.

For each location, improvements are classified as short-term (less than 1 year), mid-term (1 year to 3 years), or long-term (more than 3 years), based primarily on the scope of the improvement and the anticipated level of design and/or resources required for implementation. The rate at which improvements are implemented is also subject to availability of funding.

The following intersections are summarized in the following pages:

- » River Road at Cedar Avenue
- » River Road at De Normandie Avenue
- » Hance Road at 3rd Street
- » Hance Road at Dartmouth Avenue
- » Hance Road at Ridge Road
- » Fair Haven Road at 3rd Street
- » Fair Haven Road at Ridge Road
- » Ridge Road at Fair Haven Fields



## River Road at Cedar Avenue

This crossing plays an integral role in connecting residential neighborhoods and businesses on the north side of River Road with the residences, businesses, institutions, and parks to the south. The convenience store just north of the crosswalk, in particular, is a popular destination for many young Fair Haven residents.

Crossing at this intersection can be difficult due to high traffic volumes along River Road and failure of motorists to stop for pedestrians. Additionally, wide driveways exacerbate potential conflicts between turning vehicles and pedestrians.

The following improvements are proposed. Many of these elements can be replicated at other locations along the River Road corridor:

### Short-term

- » Incorporate high visibility crosswalk striping into the existing brick aesthetic
- » Daylight the pedestrian crossing by delineating a curb extension using a gravel epoxy surfacing and flexible bollards to narrow the pedestrian crossing and

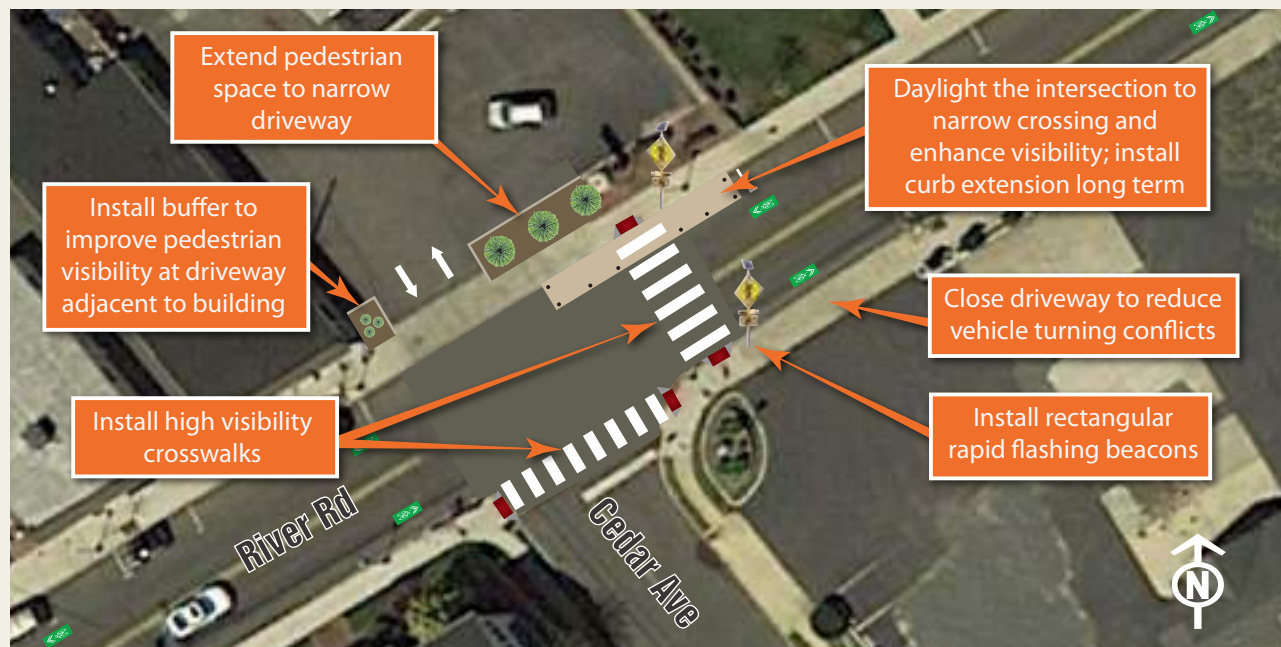
improve visibility (illustrated below). Utilize the treatment as opportunity to install an additional on-street parking space

### Medium-term

- » Extend the existing pedestrian space between River Road and the convenience store parking lot westward to narrow the driveway, consolidating the pedestrian/vehicle conflict zone, creating a more pedestrian-friendly streetscape, and distancing the driveway from the pedestrian crossing
- » Install buffer adjacent to building to improve the visibility of pedestrians along the sidewalk to motorists exiting the driveway
- » Install RRFBs to improve crossing visibility and driver “stop for pedestrians” compliance

### Long-term

- » Convert interim daylighting treatment to a permanent, raised curb extension
- » Close the westernmost driveway into the defunct gas station to consolidate access; reduce conflicts between bicyclists, pedestrians, and turning vehicles; and create a safer, more pedestrian-friendly streetscape
- » Evaluate site access and circulation issues and strategies throughout the corridor



### River Road at De Normandie Avenue

Stakeholder input identified this unsignalized intersection as a location with frequent pedestrian crossings. Within the eastern downtown business node, there is significant pedestrian activity around the area's coffee shop, cafe, preschool, shops, and offices.

Existing marked crosswalks at the northern and western sides of the intersection, as well as the existing painted parking lane, are significantly faded. The crossing of River Road is marked with pedestrian crossing signs; however, the crossing can be difficult due to high traffic volumes and failure of motorists to stop for pedestrians.

The following improvements are proposed:

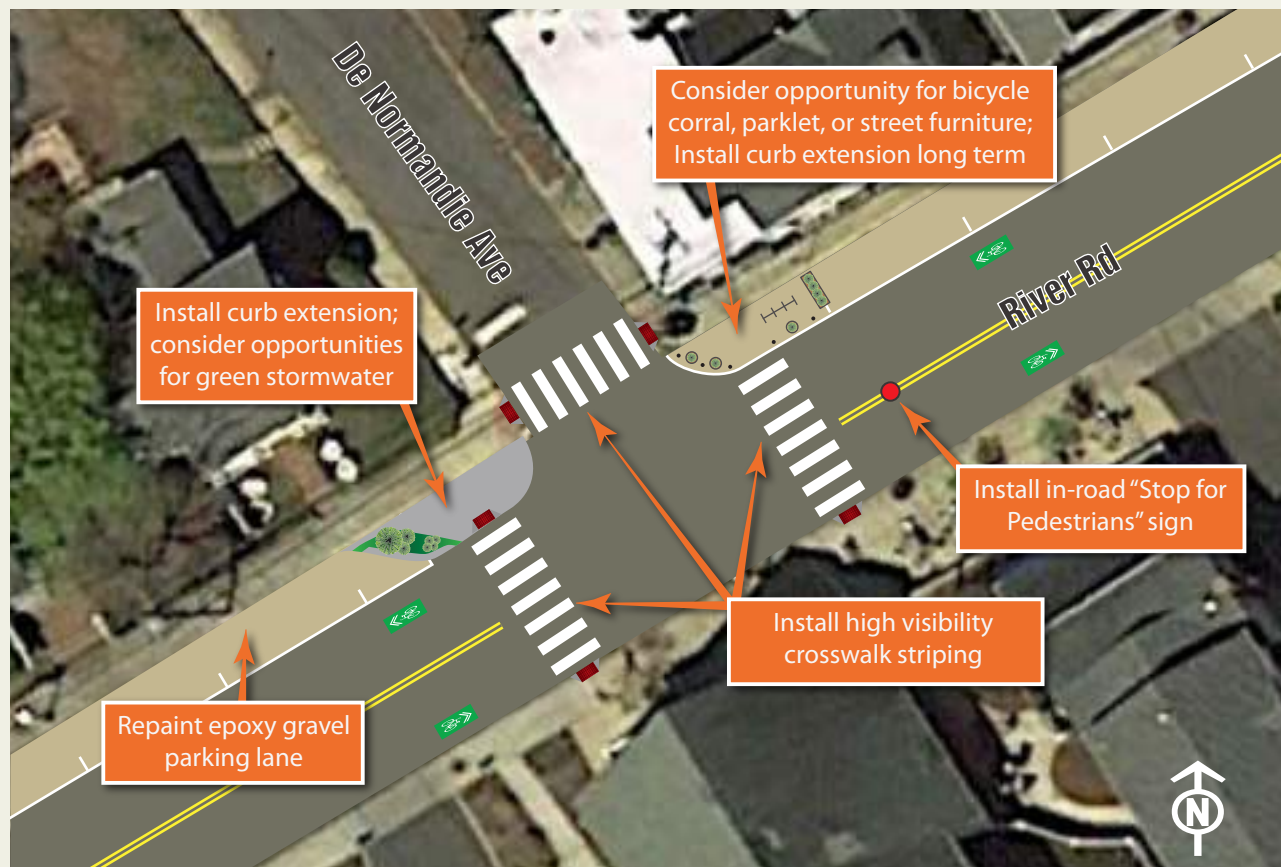
#### Short-term

- » Resurface parking lane with epoxy-gravel

- » Stripe high visibility crosswalks at all approaches
- » Install in-street "Stop for Pedestrians" signage (MUTCD Ra-6a)
- » Daylight the intersection using flexible delineators and/or planters in conjunction with the painted parking lane to define curb extensions that shorten the crossings, improve visibility, and calm traffic
- » Integrate a parklet or bicycle corral into the daylighting treatment at the NE corner, including planters, bicycle parking, and/or street furniture (illustrated below)

#### Long-term

- » Convert the interim daylighting treatments to raised curb extensions at the NW and NE corners. Consider opportunities for green stormwater, bicycle parking, and/or street furniture



### Hance Road at 3rd Street

This unsignalized intersection is one of the most heavily utilized pedestrian crossings in the Borough. 3rd Street is a major route for students who walk and bicycle to school, and all students using 3rd Street must cross at this intersection. Additionally, while the Knollwood School is situated on the west side of the intersection, the school's primary bicycle parking is located on the east side. Hance Road is also one of the main north/south connector roadways within the Borough.

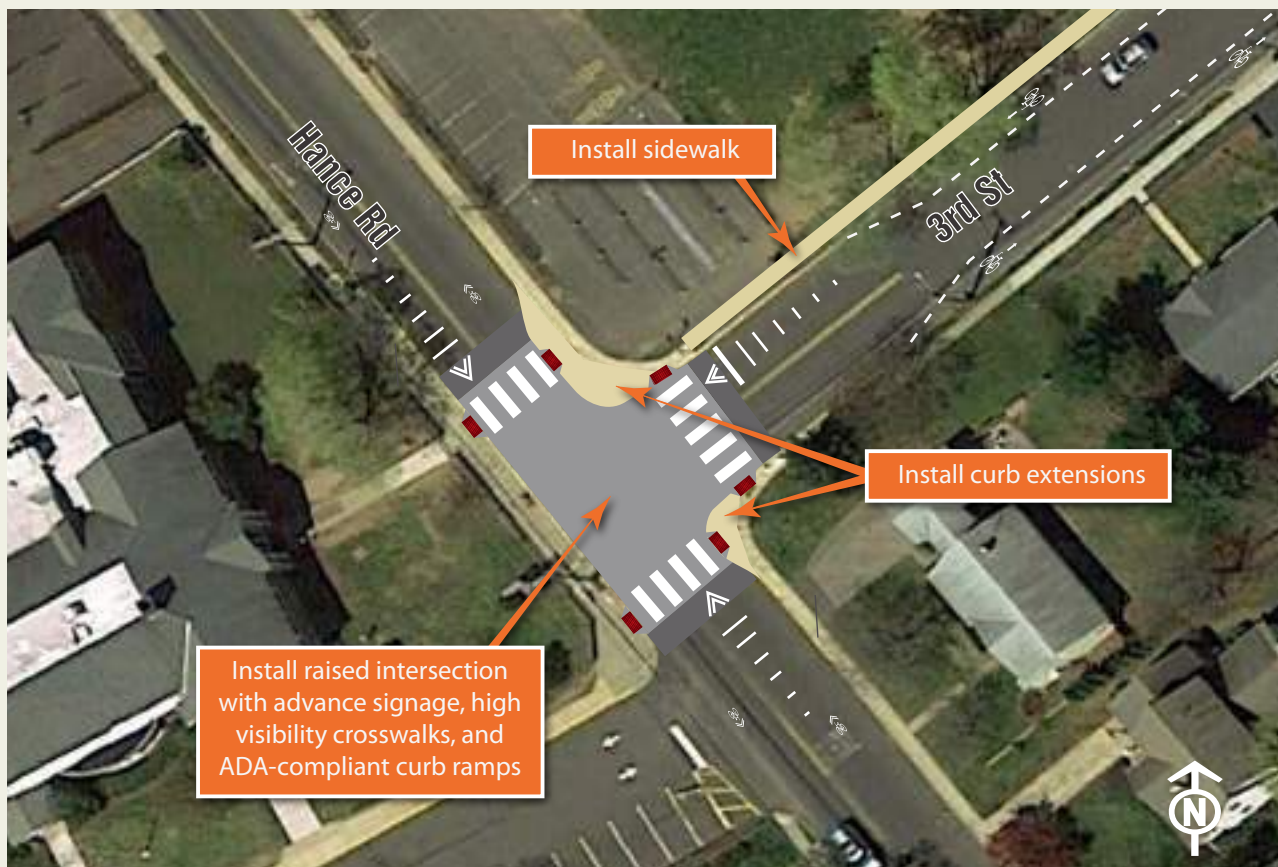
To enhance pedestrian safety and school access, and calm traffic along Hance Road in the vicinity of the school, the following improvements are proposed:

#### Short-term

- » Shorten the crossing of Hance Road by delineating a curb extension using a gravel epoxy surfacing and flexible bollards to narrow the pedestrian crossing and improve visibility

#### Long-term

- » Convert interim daylighting treatment to raised curb extensions
- » Install a raised intersection to reduce vehicular speeds, improve pedestrian visibility, and prioritize pedestrian movement. Stripe advance warning markings and signage for motorists and high visibility crosswalks and ADA-compliant elements on top of the raised intersection
- » Install sidewalk along Third Street westbound



### Hance Road at Dartmouth Avenue

This unsignalized intersection is along a walking route to the Knollwood School and the Fair Haven Playing Fields. Currently there are no striped crosswalks across Hance Road and no sidewalks to the west of the intersection along Dartmouth Avenue.

In order to enhance pedestrian safety and comfort at this crossing, the following improvements are proposed:

#### Short-term

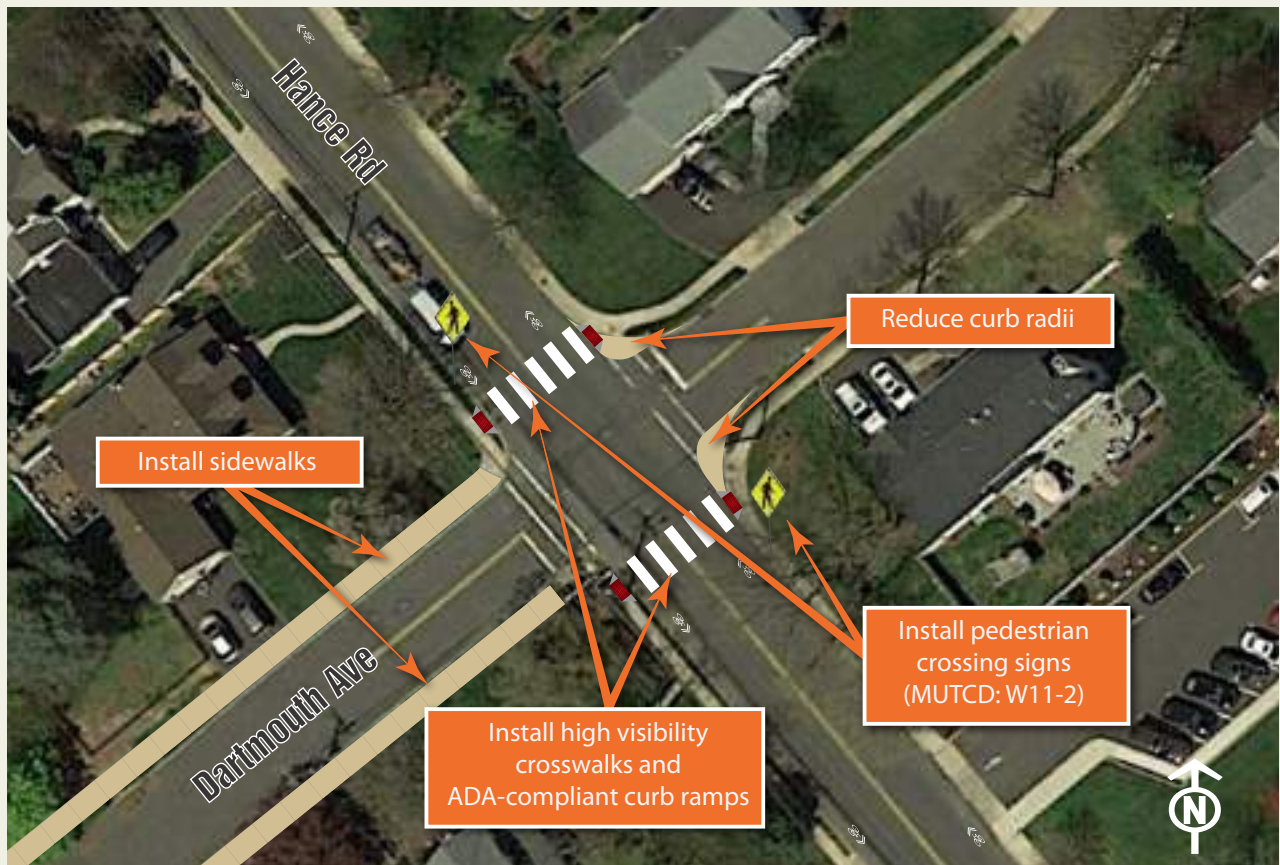
- » Install high visibility crosswalks and ADA-compliant curb ramps for the crossing of Hance Road
- » Install pedestrian crossing signs (MUTCD W11-2) to warn drivers of the crossing

#### Medium-term

- » Install sidewalk along the north side of Dartmouth Avenue to connect the intersection to the neighborhood to the west and the Knollwood School

#### Long-term

- » Install sidewalk along the south side of Dartmouth Avenue connect the intersection to the neighborhood to the west and the Knollwood School
- » Reduce the curb radii on the east side of the intersection, which would be consistent with the rest of the corridor. Reduced curb radii would encourage slower vehicle turning speeds and shorten the pedestrian crossing distance





### Hance Road at Ridge Road

This signalized intersection along the border with Rumson Borough supports access to Red Bank Regional High School, Congregation B'nai Israel, the Church of the Nativity, and Fair Haven Fields and Natural Area, as well as Rumson's Meadow Ridge Park. These destinations attract runners, bicyclists, youth, and other residents, many of whom pass through the intersection. Hance Road lacks sidewalks to the south of the intersection and Ridge Road lacks sidewalks along the eastbound direction. Marked crosswalks are currently missing from three of the four crossings. The one existing crosswalk has standard striping.

To better accommodate pedestrians at this intersection, the following improvements are proposed:

#### Short-term

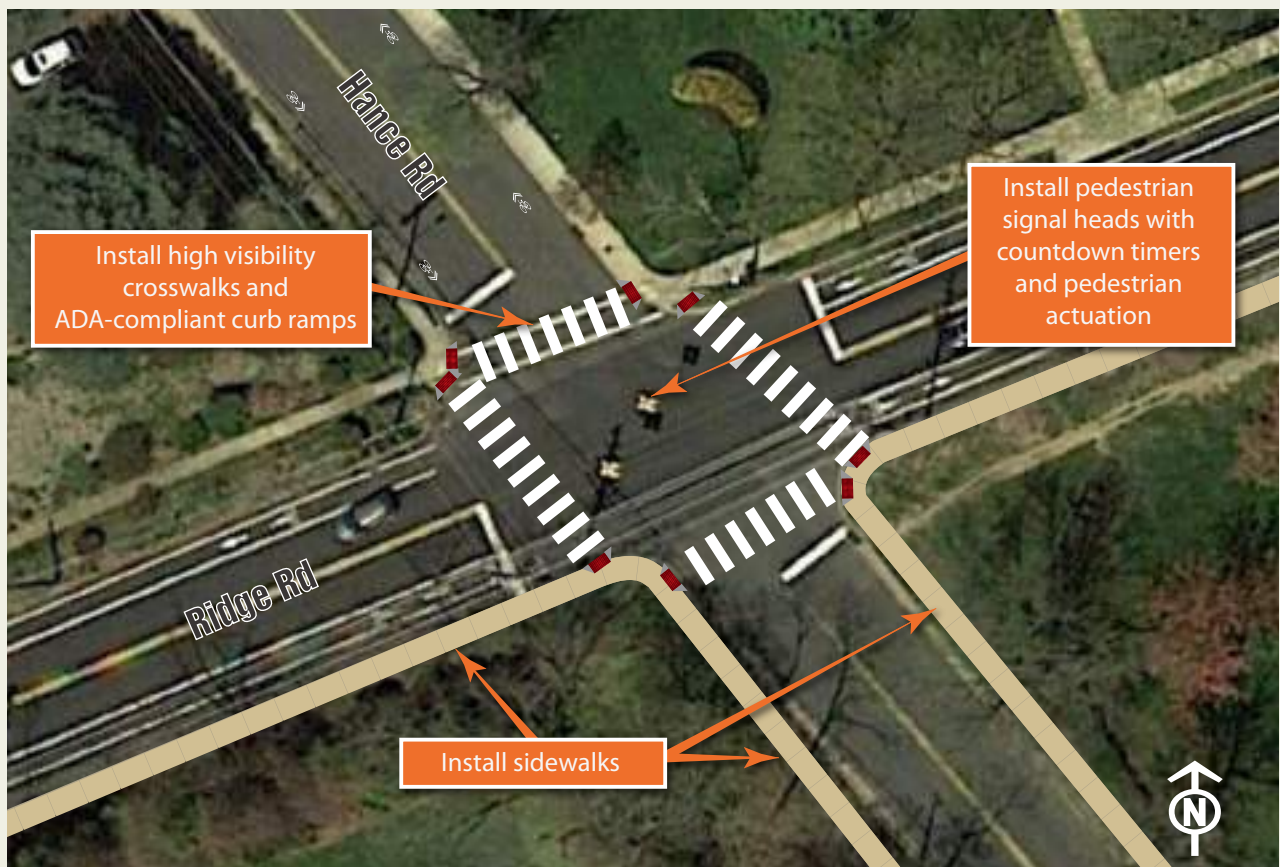
- » Install high visibility crosswalks at all four crossings and install ADA-compliant curb ramps to accommodate all users

#### Medium-term

- » Upgrade traffic signal equipment with pedestrian actuation and pedestrian signal heads with countdown timers

#### Long-term

- » Coordinate with Rumson Borough to install sidewalks along eastbound Ridge Road and along both directions of Hance Road south of the intersection. Worn paths indicate significant pedestrian activity and unmet pedestrian demand



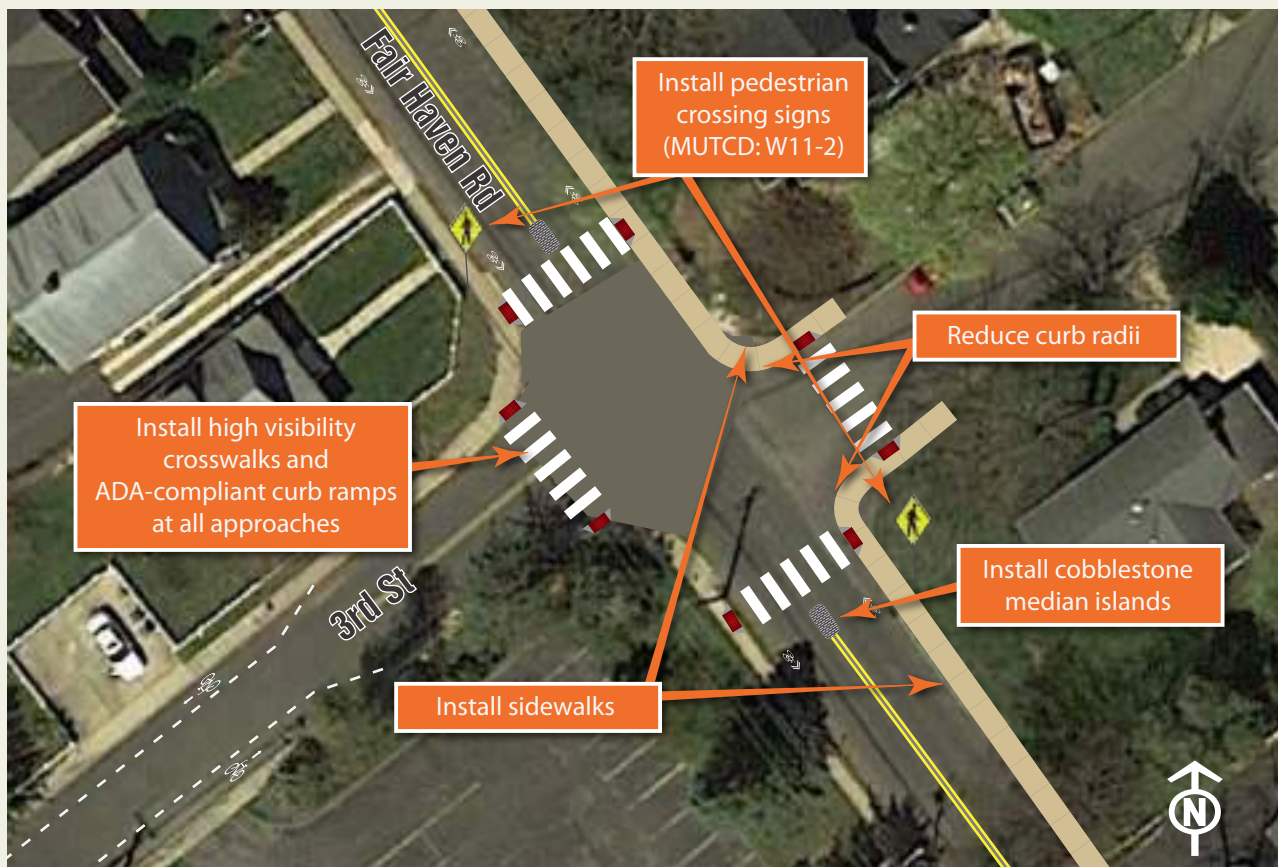
### Fair Haven Road at 3rd Street

This unsignalized intersection serves both the Knollwood School and the Sickles School. The intersection is situated along the primary route between both schools and thus attracts a high number of school-age pedestrians during school days. The eastern side of the intersection currently lacks sidewalk. All four corners of the intersection lack ADA-compliant curb ramps and there is no pedestrian warning signage installed.

To enhance pedestrian safety and comfort, the following improvements are proposed:

#### Medium-term

- » Install high visibility crosswalks and ADA-compliant curb ramps to accommodate all crosswalk users. This includes the relocation of the existing crosswalk across Fair Haven Road just to the north for a straighter, shorter alignment
- » Install pedestrian crossing signs (MUTCD W11-2) to alert drivers of the crossing
- » Reduce the curb radii on the east side of the intersection, encouraging slower vehicle turning speeds and shortening the pedestrian crossing
- » Install cobblestone median islands on Fair Haven Road approaches to help calm traffic
- » Install sidewalks along the east side of Fair Haven Road, filling gaps in the sidewalk network between Knollwood and Sickles schools



### Fair Haven Road at Ridge Road

This unsignalized intersection is the junction of two of the main roadways through the Borough. It is located adjacent to the Fair Haven Fields and Natural Area, a major recreational destination. Currently, the intersection lacks all crosswalks, sidewalks, ADA-compliant curb ramps, and pedestrian signage. With a 35 mile per hour speed limit along Ridge Road, enhanced pedestrian crossings are needed to improve pedestrian visibility and safety.

The following improvements are proposed for the intersection:

#### Short-term

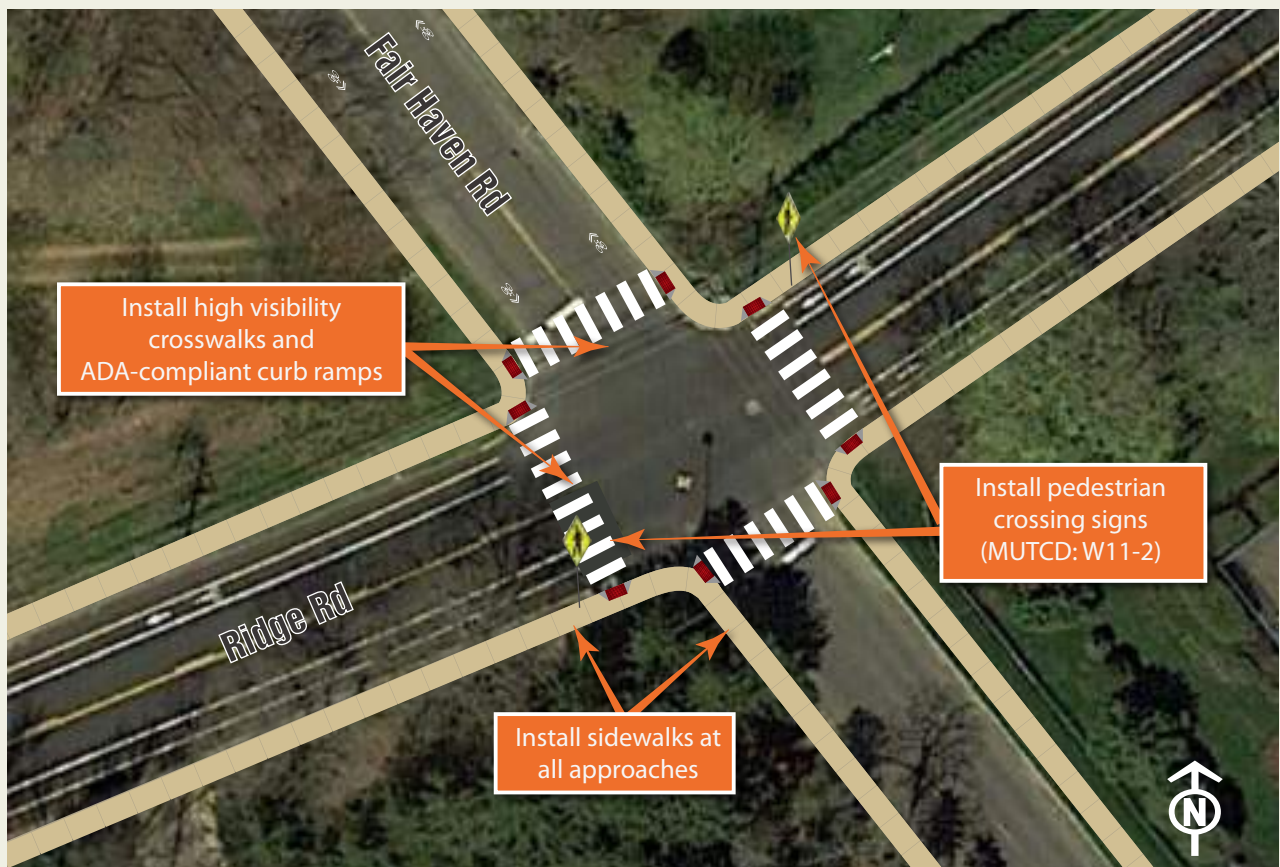
- » Install high visibility crosswalks and ADA compliant curb ramps for all crossings
- » Install pedestrian crossings signs (MUTCD W11-2) to alert drivers of the crossing

#### Medium-term

- » Install sidewalk along Ridge Road westbound and Fair Haven Road southbound (north of Ridge Road)

#### Long-term

- » Install sidewalk along Fair Haven Road northbound (north of Ridge Road)
- » Coordinate with Rumson Borough to install sidewalks along the eastbound side of Ridge Road and along Fair Haven Road south of the intersection



### Ridge Road at Fair Haven Fields

This unsignalized, midblock crossing at the driveways to the Fair Haven Fields and Natural Area and Meadow Ridge Park links two popular recreational areas. Ridge Road has a speed limit of 35 mph in this area.

Currently, the crossing has high visibility striping, pedestrian crossings signs (MUTCD W11-2), and an ADA-compliant curb ramp on the south side.

To further enhance visibility of the midblock crossing and fully integrate it with the adjacent recreation areas, the following improvements are proposed:

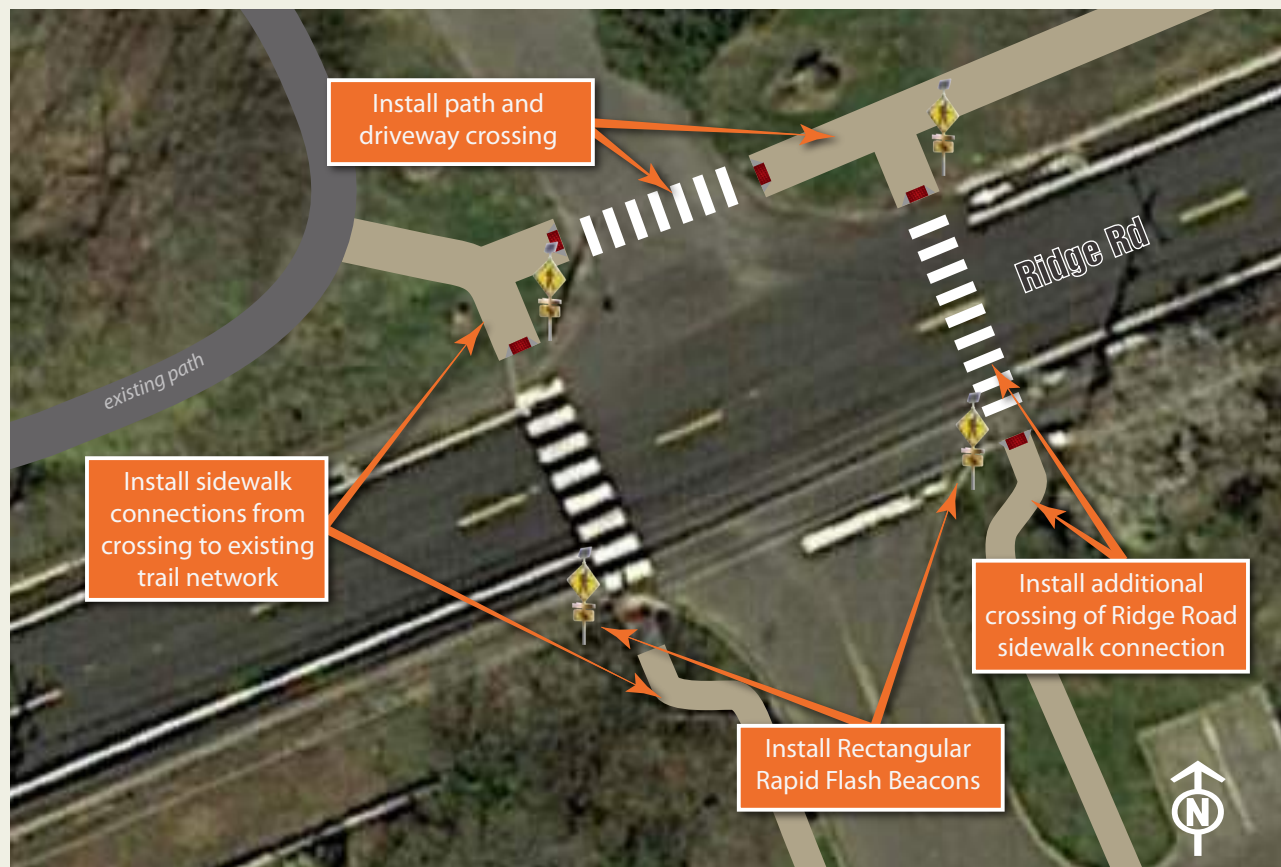
#### Medium-term

- » Install ADA-compliant curb ramp on the north side of the crossing

- » Install sidewalk/multiuse path connection from the north side of the crossing to the existing path around the perimeter of the Fair Haven Fields (approx. 35 feet)
- » Coordinate with Rumson Borough to install sidewalk/multiuse path connection from the south side of the crossing into the Meadow Ridge Park parking area (approx. 55 feet)
- » Install rectangular rapid flashing beacons (RRFBs) at the crossing to enhance pedestrian visibility and driver awareness of the crossing

#### Long-term

- » Install path along Ridge Road westbound and crossing of northern driveway
- » With completion of path, consider additional crossing of Ridge Road at the westbound approach with RRFBs and path connections



## RIVER ROAD CORRIDOR

River Road functions as the Borough's main street and local business district, and is also an important regional roadway, serving as one of the primary east/west arterials across the peninsula, linking Red Bank and points west to the Shore. The inherent conflicts between these functions create challenges to meeting the needs of all users. It is the busiest roadway in the Borough, carrying approximately 12,000 vehicles per day and the Borough's only NJ TRANSIT bus service. The speed limit within Fair Haven varies from 30-35 mph. The typical roadway width is 32 feet, accommodating two travel lanes and on-street parking permitted in the westbound direction.

Land use along the corridor includes residences and two commercial nodes. Commercial development in the eastern node, between Church Street and Oak Place, is more typical of a traditional main street, with buildings adjacent to the street frontage. Commercial development in the western node, between Smith Street and Battin Road, tends to be set-back farther from the street with ample off-street parking available.

Through the Plan's community input process, SAC members and the public expressed a desire to improve bicycle and pedestrian access along the corridor and create a

"Complete Street" through the Borough's business district.

The existing conditions inventory identified numerous positive aspects of the corridor for walkers and bicyclists, such as a high-quality streetscape with pedestrian-scale lighting, upgraded traffic signals, and a painted parking lane to visually narrow the roadway. However, several common issues were also noted, including:

- » limited access control and numerous, wide driveways in the western commercial node
- » auto-oriented development patterns
- » narrow sidewalks for a commercial corridor, with utilities and other obstructions further narrowing the effective sidewalk width
- » limited, widely spaced marked crossings of River Road
- » traffic speeds and volumes can create an uncomfortable or unappealing environment for bicyclists and pedestrians

Significant constraints, including roadway width, available right-of-way, existing development, and on-street parking needs (particularly in the eastern commercial node), limit opportunities for major changes along the corridor. Therefore, improvements are proposed in two phases.



## PHASE I: SHORT/MID TERM

Short/mid-term improvements focus on strategies that do not require right-of-way or significant changes to the roadway configuration. Elements include:

### Speed Reduction

The current speed limit along the corridor is 35 mph from the Red Bank border to Battin Road, and 30 mph from Battin Road to the Rumson border. A speed limit reduction to 25 mph, particularly between Hance Road and Elm Place, would be more consistent with the Borough Main Street concept and surrounding development patterns. A corridor speed limit reduction is also consistent with recommendations of Red Bank's *Bicycle and Pedestrian Plan*. Lower vehicle speeds will support a more friendly environment for both bicyclists and pedestrians and improved safety for all modes.

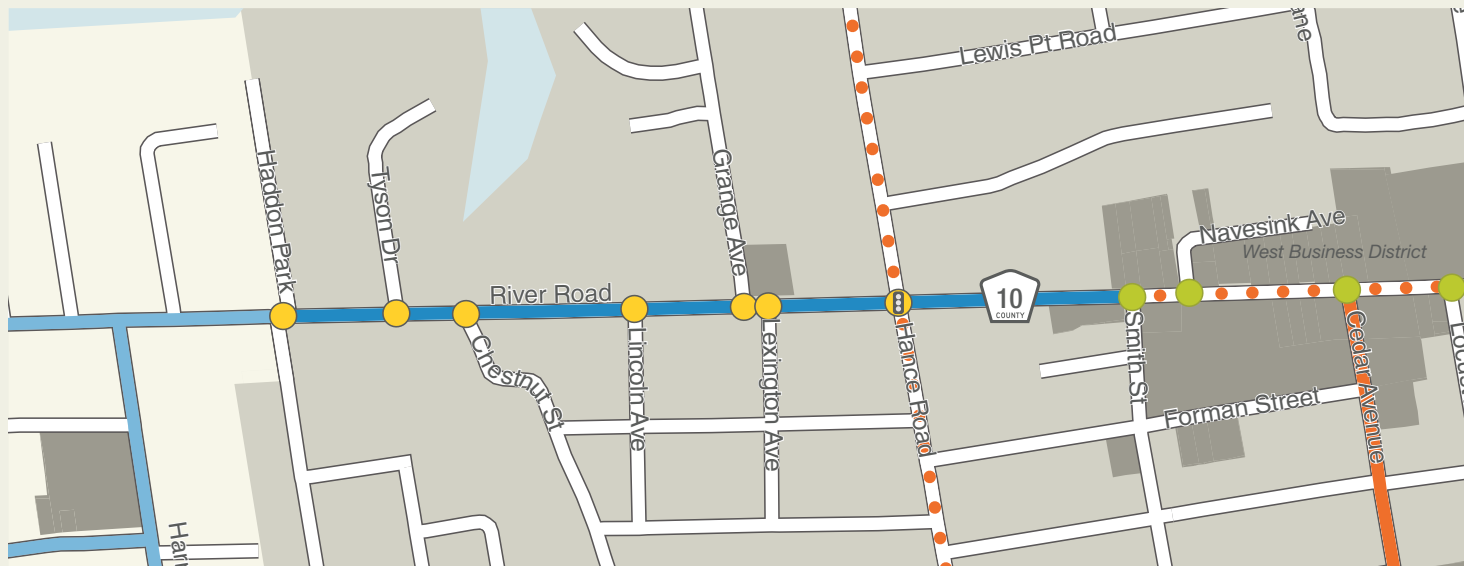
### Enhanced Pedestrian Crossings

Pedestrian crossings of River Road should be marked at every intersection along the corridor. As discussed at the start of this chapter and illustrated in the River Road at Cedar Avenue intersection example (page 41), integrate strategies such as daylighting to narrow the crossing and improve pedestrian visibility. Utilize high visibility striping and pedestrian crossing signage (MUTCD W11-2) or in-road "Stop for Pedestrians" signage (MUTCD R1-6a) to enhance visibility and driver awareness.

### Bicycle Accommodations

While a 32-foot roadway width is sufficient to accommodate an 11-foot travel lane and 5-foot bicycle lane in each direction, there are also concerns related to on-street parking, particularly in the eastern commercial node, which has more limited off-street parking options for local businesses. Therefore, a combination of shared-lane markings and bicycle lanes are proposed in this phase.

## Proposed Short/Mid-Term Improvements along River Road Corridor



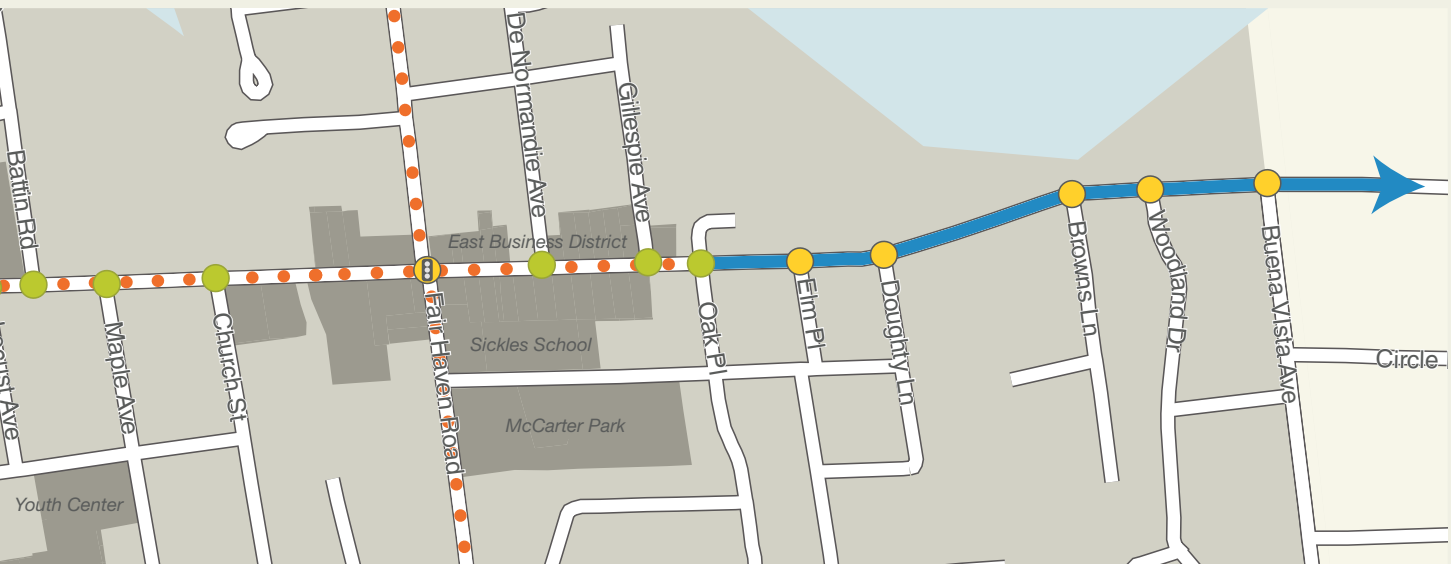
Bicycle lanes would extend east and west of the commercial areas - from Oak Place east into Rumson, and from Smith Street west into Red Bank. This would require prohibiting on-street parking in these non-commercial segments and shifting the travel lanes to the center of the roadway in order to reallocate space for the bicycle lanes. Daylighting treatments for pedestrian crossings would also not be applicable to segments with bicycle lanes since they would conflict with bicycle movement.

Through the Borough's central business district (Smith Street to Oak Place), enhanced shared-lane markings (discussed on page 61) are proposed. This would maintain on-street parking for local businesses and prioritize pedestrian improvements through this segment. While shared-lane markings are not ideal or attractive to casual or less experienced bicyclists, particularly on higher volume roadways such as River Road, they are a wayfinding aid and connect to the adjacent bicycle lane segments. The enhanced markings would improve their

visibility within the busy commercial district, assert the legitimacy of bicyclists using the street, and improve motorists awareness of bicycle activity. The reduction of the speed limit to 25 mph would also be more conducive to shared-lane markings, and the presence of highly utilized on-street parking and pedestrian crossing enhancements would support lower travel speeds and more comfortable conditions for bicyclists.

The Borough may also consider extending the western bicycle lane segment from Smith Street to Church Street, through the western commercial node. Due to the existing development pattern in this area, businesses generally have off-street parking options and are less reliant on on-street parking. Since there are numerous driveways and wide curb-cuts, there are only approximately nine marked on-street spaces in the heart of the western commercial node (Smith Street to Locust Avenue).

- Pedestrian Crossing
- Enhanced Crossing / Intersection Daylighting
- Bicycle Lane
- ⋯ Shared Lane Markings
- Bicycle Boulevard



## PHASE II: LONG TERM

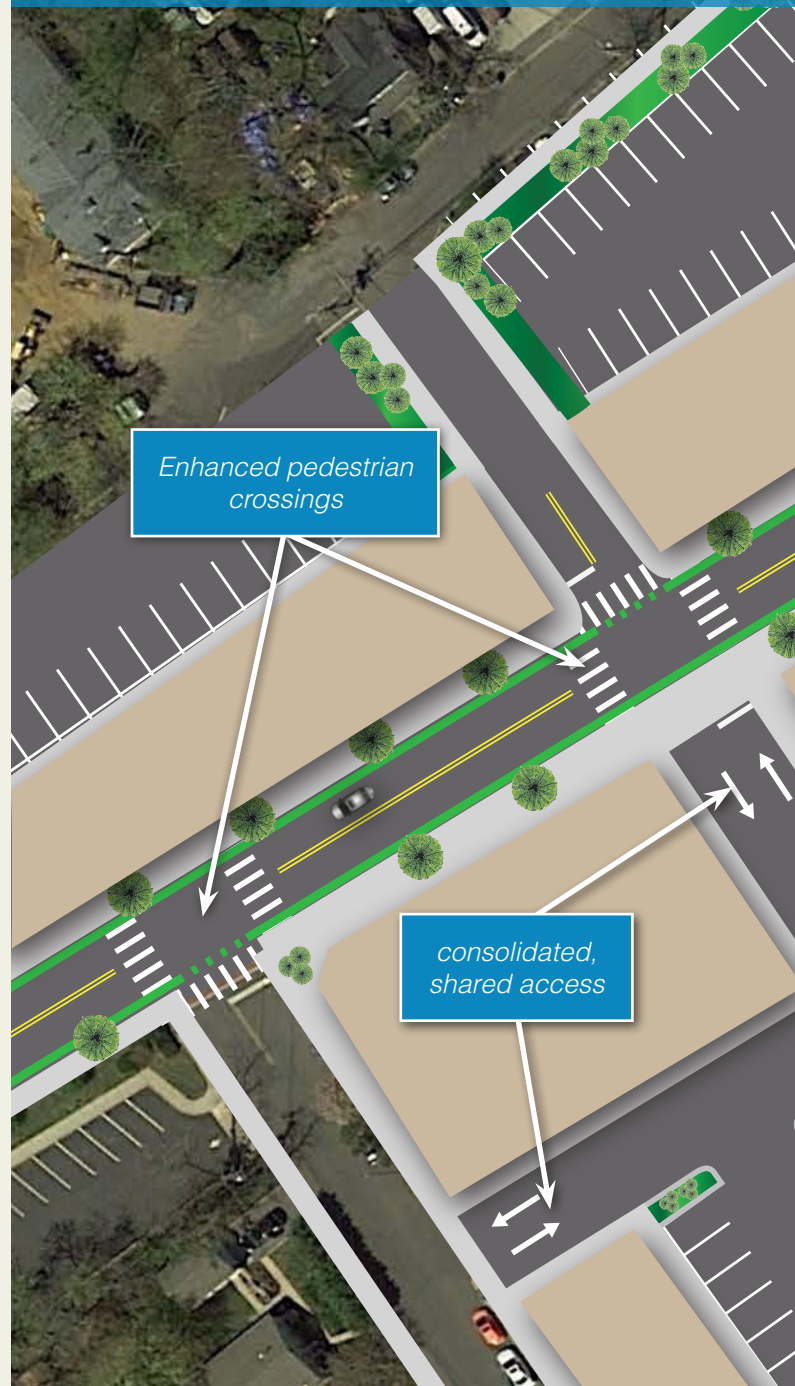
Long-term improvements should seek to leverage redevelopment as opportunities to address access control issues and constraints related to limited right-of-way. The Borough should create a long-term vision and cohesive redevelopment plan for the corridor, particularly in the western commercial node, that integrates land use and transportation objectives, as well as supportive regulations or zoning revisions.

Elements of the plan to support a vibrant, active, and economically strong Borough downtown and a more friendly environment for bicyclists and pedestrians should include:

- » access control and circulation, including shared access and shared parking, to minimize driveways
- » wide sidewalks and additional pedestrian amenities such as street trees, street furniture, and pedestrian-scale lighting
- » reduced set-backs to pull buildings closer to the street, supporting a more walkable downtown environment and encouraging slower traffic speeds
- » off-street parking behind the buildings, buffered from surrounding neighborhoods
- » marked, enhanced pedestrian crossings at all legs of all intersections
- » enhanced mid-block crossings to break up long block lengths
- » pedestrian connections between the street frontage, rear parking, and surrounding area
- » convenient, secure bicycle parking
- » placemaking strategies such as a unified streetscape design and materials palette, parklets, wayfinding, outdoor dining, flexible community event space, or public open space
- » green infrastructure, such as rain gardens, to mitigate stormwater run-off

These general principles are illustrated in the conceptual redevelopment graphic to the right.

### *River Road Corridor Redevelopment Concept: Streetscape and Development Improvements*







There are several options to enhance access for bicyclists. One option, as shown on the previous page, is to remove the existing on-street parking along River Road westbound, locating all parking off-street behind the buildings. Maintaining the existing cartway width, roadway space could then be reconfigured to accommodate 5-foot wide on-street bicycle lanes in each direction alongside 11-foot travel lanes.

Alternatively, as shown in the variation to the right, raised bicycle lanes could be integrated into a wider streetscape design as a part of redevelopment. Contrasting materials and/or landscaping could differentiate spaces for bicyclists and pedestrians, and a curb zone with street trees, signage, lighting, etc., could buffer bicyclists from the roadway and on-street parking.

Raised bicycle lanes would provide a facility separated from motor vehicle traffic, making them more comfortable and attractive for casual bicyclists, children, and families. Raised bicycle lanes would also allow on-street parking to be maintained, which provides a traffic calming element, buffers the sidewalk from traffic, and fits the character of a Borough downtown. Additionally, curb extensions could be integrated into the streetscape, significantly improving the pedestrian crossings and helping calm traffic.

As a land use component of the redevelopment plan, the Borough may also examine ways to incorporate flexible public space into the downtown, as shown in the conceptual alternative to the right. The space could create a town square and be used for community events, farmers markets, or park space with seating, plantings, and/or outdoor dining. To balance the provision of community space with parking needs, redevelopment may need to consider parking offset strategies, reduced parking minimums, or a parking structure consistent with a Borough downtown context.

### *River Road Corridor Redevelopment Concept: Enhanced Bicycle Access, Town Center, and Public Space*

