VENTNOR–MARGATE

BICYCLE & PEDESTRIAN PLAN

VENTNOR – MARGATE BICYCLE & PEDESTRIAN PLAN

October 2016

Acknowledgments

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Executive Summary

In 2014, the Cities of Ventnor and Margate initiated this planning effort with a desire to make both cities safer and more accessible for walking and biking. Each city submitted a grant application with accompanying resolution of support to NJDOT's Local Bicycle/Pedestrian Planning Assistance program. The cities were awarded a planning grant to develop a joint bicycle and pedestrian circulation plan and worked together to develop the ***Ventnor-Margate Bicycle and Pedestrian Plan.*** The plan's study area includes the combined municipal limits of Ventnor City and Margate City. As the first multi-municipal initiative to be funded under this program, the study offered a unique opportunity to develop a plan with shared objectives towards creating safer and more accessible travel for pedestrians and bicyclists.

The *Ventnor-Margate Bicycle and Pedestrian Plan* sets out a framework to improve pedestrian and bicycle conditions in these densely populated beach communities. **Chapter 1** provides background information on the study, while **Chapter 2** defines existing conditions for walking and biking within the study area. Chapter 2 outlines the data collection process, identifies key destinations and unique assets, inventories existing bicycle and pedestrian facilities, and describes the key issues related to these facilities. Chapter 2 also contains a detailed analysis of bicycle and pedestrian crashes.

Chapter 3 describes stakeholder outreach efforts and summarizes the project needs. The study incorporated extensive local participation, including two public meetings, a study website with online interactive map, and three meetings with a steering committee comprised of local stakeholders. Based on the input from local stakeholders, the following goals were developed:

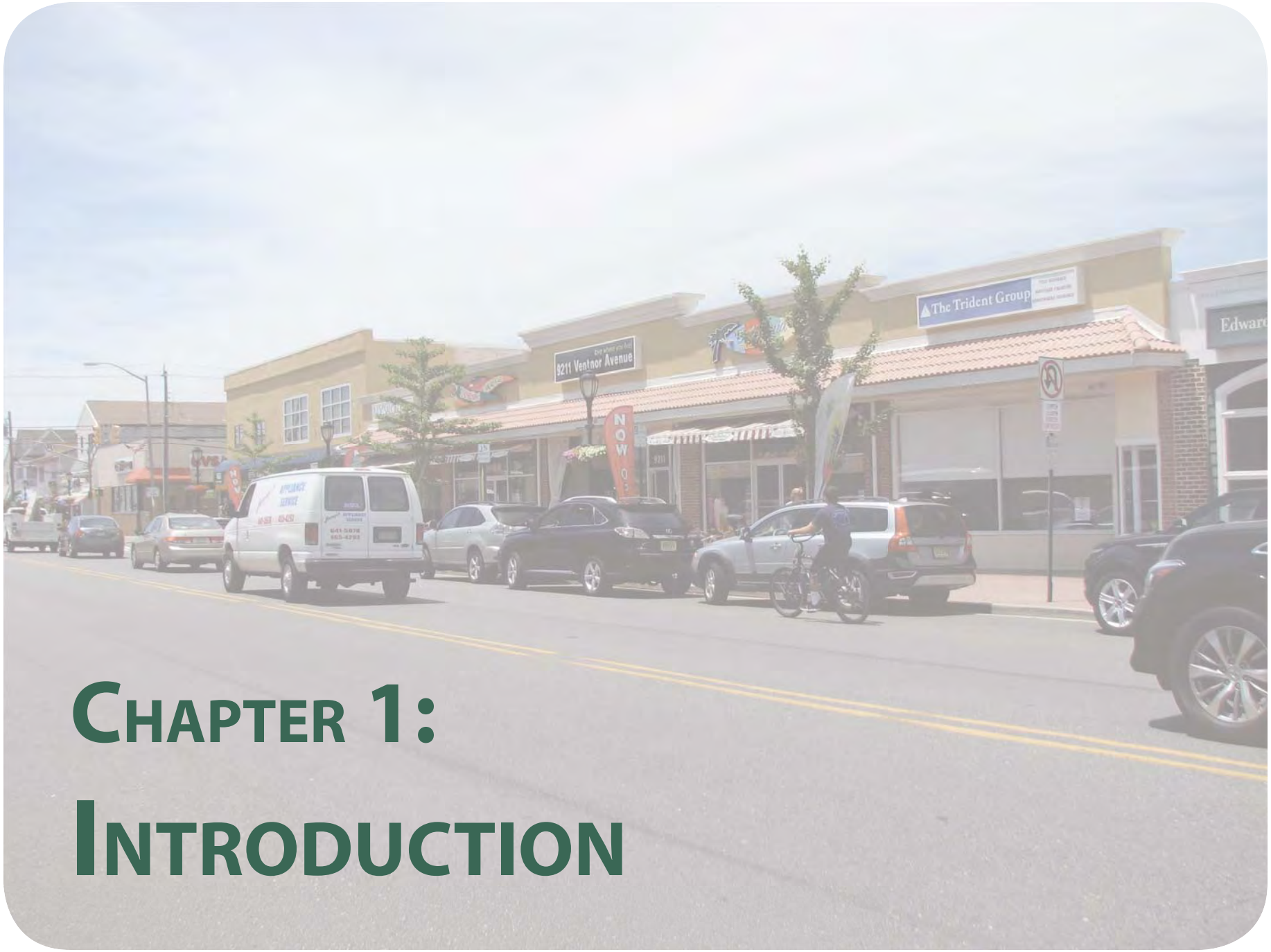
- Improve bicycle and pedestrian safety city-wide
- Facilitate walking and bicycling along and across major travel corridors
- Connect Ventnor and Margate to the regional bicycle network
- Develop safe routes for children to walk and bike to school
- Improve walking and biking conditions on the boardwalk in Ventnor

Chapter 4 presents recommendations to create a comprehensive bicycle and pedestrian network for the study area that improves non-motorized safety and promotes access to local and regional destinations. The plan has five individual components:

1. Pedestrian Improvement Plan
2. Bicycle Network Plan
3. Focus Areas
4. Safe Routes to School
5. Policy & Program Recommendations

The Pedestrian Improvement Plan and Bicycle Network Plan components are framework plans that work together to create an integrated bicycle and pedestrian network. The Focus Areas component addresses major travel corridors and key areas within Ventnor and Margate where a higher level of evaluation was necessary to address bicycle and pedestrian issues. The Safe Route to School component addresses specific problem areas along the primary school walking routes, while the Policy & Program Recommendations component focuses on the non-engineering solutions.

Chapter 5 provides guidance on implementing the plan. This chapter includes an implementation matrix categorizing the full range of recommendations. It also includes a table of potential funding sources, as the plan is intended to help both cities to attract financial support for implementation through grant programs that fund bicycle and pedestrian projects.



Chapter 1: Introduction

Study Background

In 2014, the Cities of Ventnor and Margate sought funding from the New Jersey Department of Transportation – Office of Bicycle and Pedestrian Programs (NJDOT/OBPP) to develop a comprehensive bicycle and pedestrian circulation plan. Each city submitted a grant application with accompanying resolution of support to NJDOT's Local Bicycle/Pedestrian Planning Assistance program. The cities were awarded a joint planning grant and worked together to develop the Ventnor-Margate Bicycle and Pedestrian Plan. As the first multi-municipal initiative to be funded under this program, the study offered a unique opportunity to develop a plan with shared objectives towards creating safer and more accessible travel for pedestrians and bicyclists.

The plan provides a framework to improve pedestrian and bicycle conditions by outlining both individual and shared options for each community to consider now and into the future. It will also assist in attracting financial support for implementation through grant programs that fund bicycle and pedestrian projects. A copy of both resolutions of support for the study are included in Appendix A.

Overview of Study Area

The plan's study area includes the combined municipal limits of Ventnor City and Margate City (see Figure 1) and is located between Atlantic City and the City of Longport in Atlantic County, New Jersey. The Atlantic Ocean borders the study area to the southeast and the bay serves as the border to the northwest. Together, the municipalities of Ventnor, Margate, Longport, and Atlantic City comprise Absecon Island.

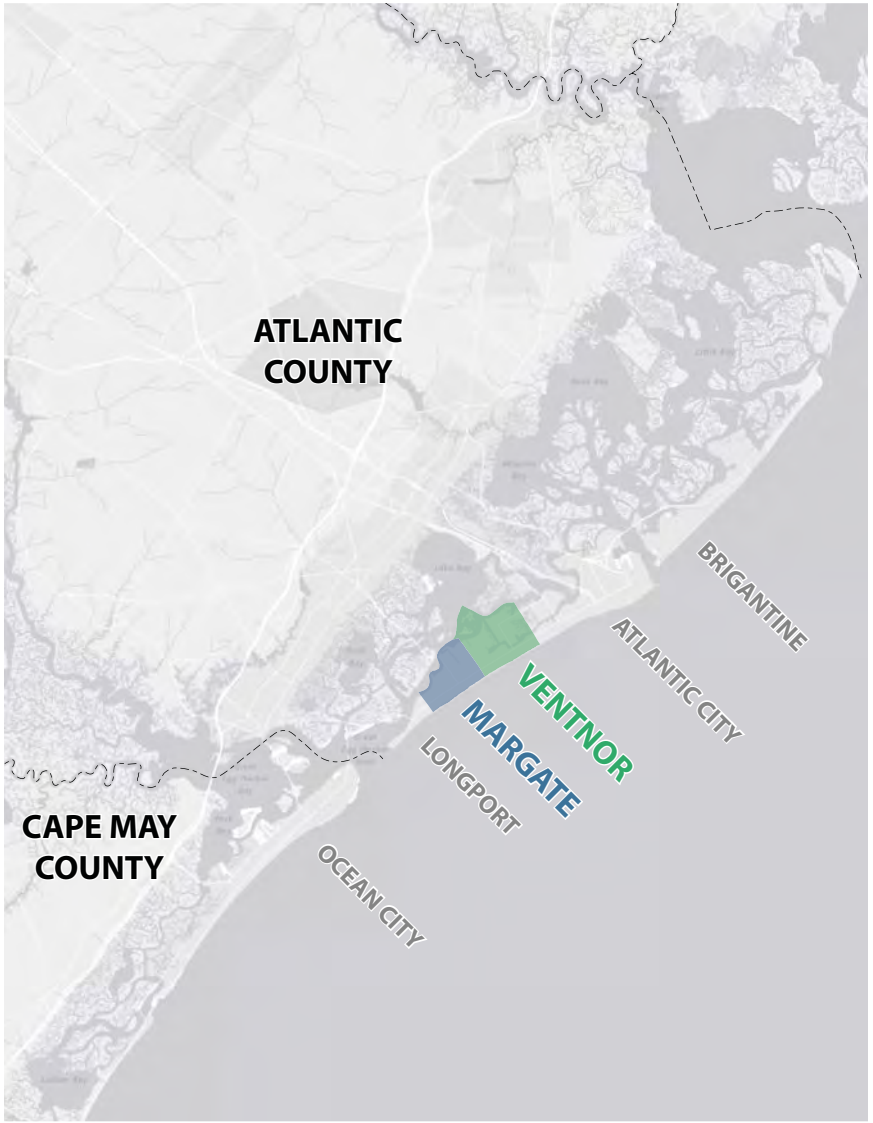


Figure 1: Study Area Limits

Ventnor and Margate are densely populated beach communities with a strong local tourism economy. Both cities feature a mix of residences, shopping, restaurants, and other businesses that are easily accessible by walking and biking. Both cities also experience significant seasonal variations in population. Based on 2010 county data, Ventnor has a year-round population of 10,650 that expands to over 38,000 on a summer weekend. Margate experiences a similar population increase from 6,350 year-round to 31,000 in-season. The seasonal population variation is accompanied by a corresponding increase in the number of people walking, driving, biking, and parking in these communities. A key element of the plan was understanding and addressing both seasonal and year-round mobility needs.

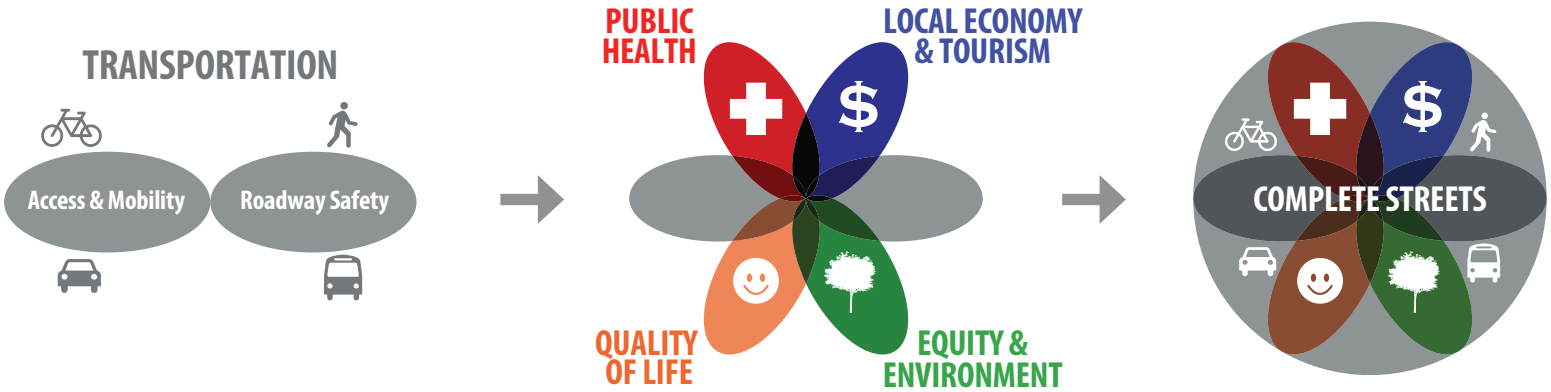
Why Plan for Pedestrians and Bicyclists?

There has been a growing national movement towards designing and building "Complete Streets" in our communities. The Complete Streets philosophy starts with the notion that roadways should incorporate the needs of all users, from bicyclists to pedestrians to motorists, and of all ages and abilities. In 2010, the United States Department of Transportation (USDOT) issued a policy statement that every transportation agency – including USDOT – has the responsibility to improve conditions and opportunities for walking and bicycling and integrate them into their transportation systems. USDOT also encourages transportation agencies to go beyond minimum standards to provide safe and convenient facilities for these modes.

At the same time, there is growing recognition of the many benefits that walking and bicycling provide. They are affordable and environmentally sound forms of transportation that can lead to

more vibrant communities. Being able to safely and conveniently walk or bike from one place to another improves mobility options and can enhance a community's quality of life. In addition, the health benefits of regular physical activity are far-reaching, including reduced risk of coronary heart disease, stroke, and other chronic diseases; lower health care costs; and improved quality of life for people of all ages. Recognizing these benefits, the US Surgeon General singled out walking as a powerful health solution in his 2015 landmark ***Call to Action to Promote Walking and Walkable Communities***, stating that "walking is a simple, effective and affordable way to build physical activity into our lives…even a small first effort can make a big difference in improving the personal health of an individual and the public health of the nation."

In 1995, NJDOT developed a state-wide bicycle and pedestrian plan that established a vision for New Jersey as a place where people choose to walk or bicycle with confidence and a sense of security. The plan was first updated in 2004 and is again being updated in 2016. In December 2009, NJDOT adopted a Complete Streets policy that addresses the needs of non-motorized users in the planning and design of state facilities. Together, NJDOT's bicycle and pedestrian plan and Complete Streets policy have helped to establish New Jersey as a national leader in the campaign to complete the streets. The City of Margate also adopted a Complete Streets policy in September 2013.



Chapter 2:
Existing Conditions

This chapter outlines existing conditions for walking and biking in the study area. It summarizes the data collection process; describes key destinations and unique assets; provides information on existing road, bicycle, and pedestrian facilities; identifies key issues related to these facilities, and provides an analysis of bicycle and pedestrian crashes.

Data Collection & Mapping

Project mapping was developed based on existing GIS data, field visits, and input from steering committee members. Site observations were conducted at various points in the study to document existing conditions for pedestrians and bicyclists, understand potential issues and constraints, and identify opportunities to improve walking and biking within the study area. The data sources used to formulate this plan are listed below:

- Aerial Orthophotography (NJGIN, 2012)
- Bus Route Timetables (NJTRANSIT, 2015)
- Crash Data (Plan4Safety, 2005-2015)
- Crash Reports (Ventnor & Margate Police Dept, 2010-2015)
- Open Space GIS Layers (NJDEP, 2008)
- Parcel and Road GIS Layers (Atlantic County, 2009)
- Pedestrian Count Data for Ventnor Avenue (CR 629 Signal Optimization Project, SJTPO, July/August 2015)
- Photograph Inventory (Urban Engineers, 2016)
- Roadway & Sidewalk Inventory (Urban Engineers, 2016)
- Straight Line Diagrams (NJDOT, 2010)
- Striping Plans for Wellington Avenue (Atlantic County, 2015)
- Traffic Count Data (NJDOT Roadway Information and Traffic Monitoring System Program)
- Traffic Signal Timings/Plans for Atlantic Avenue (Ventnor & Margate Police Departments, 2015)
- Wetland GIS Layer (NJDEP, 1986)

Related Planning Efforts

Both cities embarked on a Master Plan update at the same time this plan was being developed. Urban coordinated with the Master Plan consultants in an effort to achieve consistency between the plans. Other relevant planning documents that were reviewed include:

- Atlantic City Bicycle and Pedestrian Plan (NJDOT, 2013)
- Atlantic County Bicycle Facilities Inventory (CCCTMA, 2005)
- Atlantic County Master Plan with Bicycle Element (Atlantic County, 2000)
- Margate Master Plan (Original 2004 with 2006 Revision)
- Margate School Travel Plan (CCCTMA, 2015)
- Margate Municipal Code (online version)
- Ventnor Master Plan (2006 Re-examination)
- Ventnor School Travel Plan (Rutala Associates, 2015)
- Ventnor Municipal Code (online version)

Bicycle & Pedestrian Activity Generators

Both Ventnor and Margate are beach communities with a mix of residences, shopping, restaurants, and other businesses that are easily accessible by walking and biking. The beach and Ventnor boardwalk are major destinations in themselves and generate numerous walking and biking trips. Pedestrian counts conducted along Ventnor Avenue in July 2015 for the CR 629 Signal Optimization Project helped to identify the major beach travel corridors. The highest pedestrian volumes in the study area were at Washington and Frontenac Avenues in Margate (see Figure 2). At each intersection, over 2,100 people crossed Ventnor Avenue in an 8-hour Saturday period and pedestrians generated nearly 1/3 of all trips through the intersection. Fredericksburg and Newport Avenues had the highest 8-hour peak pedestrian counts in Ventnor.

In addition to the beach and Ventnor boardwalk, other major activity generators in the study area include (shown in Figure 2 – Activity Generators):

- Commercial districts on Atlantic, Ventnor, Dorset, and Amherst
- Public facilities such as libraries, recreation centers, and parks
- Lucy the Elephant in Margate
- Katz Jewish Community Center on Jerome Avenue
- Ventnor Shopping Plaza on Wellington Avenue
- NJ Transit bus stops along CR 629

Schools are another major generator for walking and biking trips. Ventnor and Margate each have their own school districts, and both are “walking districts” where busing is not provided. The Margate School District consists of two schools: William H. Ross Elementary School (K-4 grade) on Monmouth Avenue and Eugene A. Tighe Middle School (5-8th grades) on Amherst Avenue. The Ventnor School District provides kindergarten through 8th grade at the Ventnor Educational Community Complex (VECC) on Lafayette Avenue. Public high school in both communities is provided at a regional facility in Atlantic City.

Figure 2: Bicycle & Pedestrian Activity Generators

Atlantic Avenue

Ventnor Avenue

Existing Street Characteristics

Understanding characteristics of the existing street network- including traffic circulation patterns and on-street parking demand - is critical to planning for bicycle and pedestrian travel. These elements have considerable influence on walking and biking conditions both along and across roadways in the study area.

Regional access from the mainland onto to Absecon Island is provided into Ventnor via the Atlantic City Expressway and Albany Avenue, into Margate via Mill Road/Jerome Avenue (CR 563), and into Longport via the Route 152 JFK Memorial Bridge. Major and minor arterials within the study area include Atlantic Avenue, Ventnor/Dorset/Wellington Avenues (collectively County Route 629), and Jerome Avenue (CR 563). Additional major collector streets include Monmouth Avenue, Winchester Avenue, and Amherst Avenue.

POSTED SPEEDS & STREET/LANE WIDTHS

Site visits were conducted to inventory characteristics of the existing road network. Figure 3 shows posted speed limits and street widths for selected major roads within the study area. Curb-to-curb street width measurements were used to develop existing and recommended street cross-sections. The only streets within the study area with posted speeds exceeding 25 mph are Atlantic Avenue (35 mph) and Wellington Avenue (35-40 mph).

Figure 3: Street Widths and Posted Speed Limits

TRAFFIC VOLUMES & TRAFFIC SIGNALS

Figure 4 shows traffic signal locations and average daily traffic (ADT) volumes for selected major roads within the study area. Traffic volumes in the study area are heavily influenced by seasonal fluctuations, with peak volumes occurring on weekends in July and August. Atlantic Avenue has the highest ADT in the study area (volumes increase approaching Atlantic City) followed by Ventnor and Jerome Avenues.

Traffic volume data was obtained from NJDOT's Roadway Information and Traffic Monitoring System Program and supplemented with data from the CR 629 Signal Optimization Project. This project developed timing plans for the traffic signals along Ventnor Avenue and Dorset Avenue with the goals of minimizing overall intersection and network delay, decreasing emissions, and improving safety. Data collection occurred in July and August 2015 and included turning movement counts, travel time runs, automatic traffic recorder data, and field inventory and observations. The traffic analysis showed that conventional signal optimization with equipment upgrades would provide significant operational benefits for traffic flow.

ON-STREET PARKING AND ONE-WAY STREETS

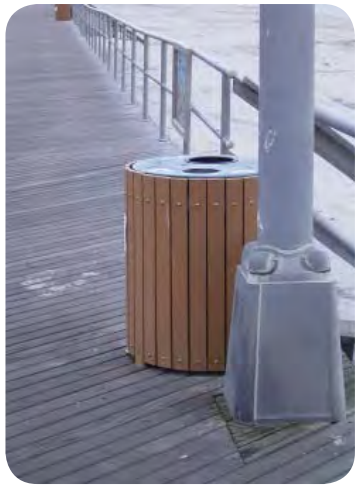
Both cities have an extensive system of one-way streets. Many of these one-way streets run perpendicular to the beach and are only wide enough for one travel lane with on-street parking. On-street parking is an important component of the transportation system in both communities and is present on both sides of major streets and most local streets, where width allows. Throughout the study area, demand for on-street parking dramatically increases in the summer season.

TRANSIT SERVICE

Transit service in the study area is provided by NJ TRANSIT, which operates the Route 505 bus along Ventnor Avenue between Longport and Atlantic City with 15 minute peak headways. This route also provides limited service to Ventnor Heights and the Ventnor Shopping Plaza via Dorset and Wellington Avenues. Bus stops are spaced every few blocks in both directions of Ventnor Avenue, and most are located adjacent to sidewalk. An exception is the parkway section between N. Wilson Avenue and N. Mansfield Avenue in Margate, where bus stops are located in grass areas adjacent to the parking lane. Transit shelters are provided at two locations in the Washington Avenue business district in Margate.

Bus Shelter on Ventnor Ave

Figure 4: Traffic Signals and Volumes



Ventnor's Boardwalk

Existing Conditions for Walking and Biking

Margate and Ventnor are barrier island communities with a strong local tourism economy. Planning in these communities should recognize that many people walking along and crossing major roads are beach-goers – often families with children – carrying beach chairs and pushing strollers and other equipment. This not only results in lower walking speeds, but also heightens the need for ADA facilities such as curb ramps and beach access ramps. Existing bicycle and pedestrian facilities, problem areas, and other considerations are described in this section for each of the major corridors in the study area:

THE BOARDWALK IN VENTNOR

Ventnor's boardwalk is a shared use facility that runs adjacent to the beach and continues into Atlantic City. Bicycle and pedestrian access to the boardwalk is provided via ramps at the end of each intersecting street. Wider ramps are provided at Washington, New Haven, Cornwall, and Suffolk, and Vassar Square. The boardwalk is 20' wide, but has an effective clear width of approximately 14' due to benches, light poles, and railings. The boardwalk has lighting at night throughout the year.

Signage is present at entrance points indicating the hours that bicycles are allowed to ride on the boardwalk. Figure 5 compares bicycle hours of operation in Ventnor and Atlantic City. The hours are consistent for weekends in the peak season, but differ in the off peak season. The main difference is that bicycle riding is only permitted during daylight hours in Ventnor.

The boardwalk is a very important asset to the community, and is well used by bicyclists and pedestrians for both recreational and transportation purposes. This high level of activity in a limited space results in conflicts between pedestrians and bicyclists, particularly during the busy summer months.

Figure 5: Boardwalk Existing Conditions

Decatur Avenue Beach Block

Bicycling on Atlantic Avenue

BEACH ACCESS IN MARGATE

The boardwalk ends at the Ventnor/Margate border at Fredericksburg Avenue. In Margate, bulkheads are located at the end of each approaching street. Pedestrian access to the beach is provided at each street via stairs over the bulkhead. A few streets have openings in the bulkhead for handicapped access, and ramps over the bulkhead are present at Decatur, Granville, and Delavan Avenues to accommodate strollers, equipment, and beach maintenance vehicles. These three streets are among the highest pedestrian counts in Margate.

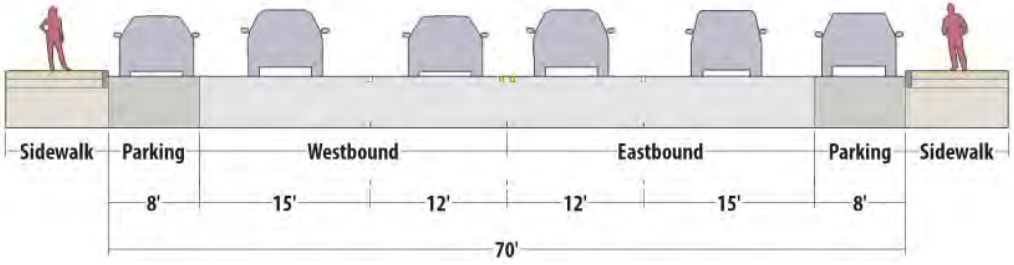
Approaching Longport, most of the beachfront blocks contain multi-story residential buildings. Off-street parking for these buildings typically fronts on the side streets and interrupts the sidewalk corridor. This is particularly acute on Decatur Avenue, where sidewalks are missing on both sides of the street due to off-street parking.

ATLANTIC AVENUE

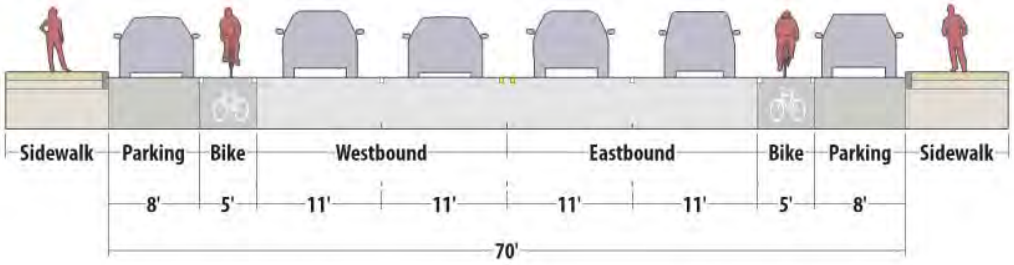
As the closest parallel street to the beach, Atlantic Avenue is the main travel route through the study area. Atlantic Avenue carries four lanes of traffic through Ventnor and Margate, and then reduces to two lanes with a center turn lane in Longport. In both communities, on-street parking is allowed on both sides of Atlantic Avenue. Figure 6 shows the key difference between Atlantic Avenue's existing dimensions in Margate and Ventnor. Margate's section includes a 5' wide bike lane in both directions, while Ventnor has wider inside and outside lanes and no bicycle lanes.

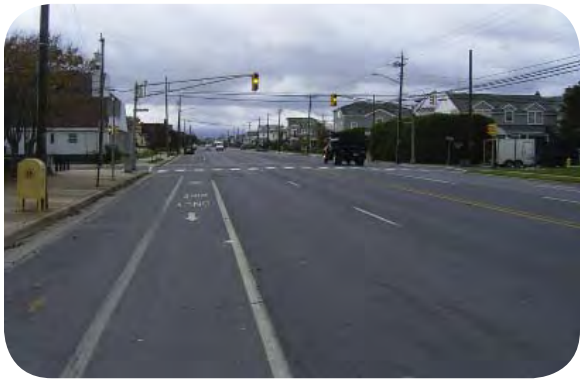
Figure 6: Atlantic Avenue - Existing Dimensions

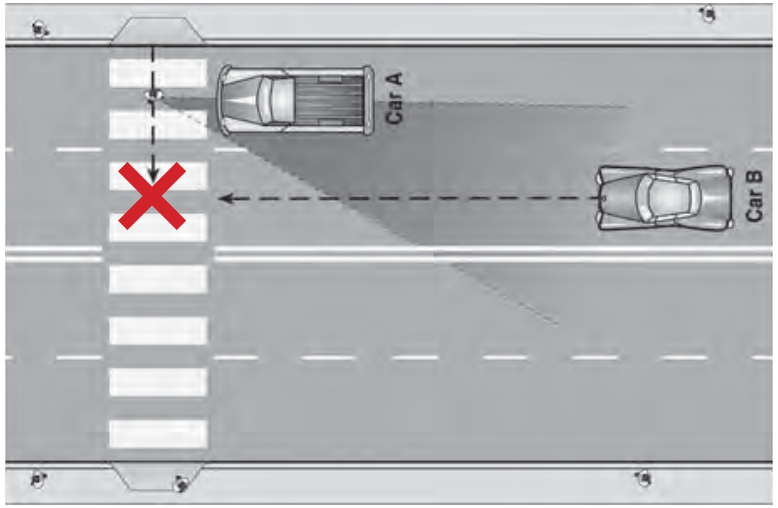
VENTNOR



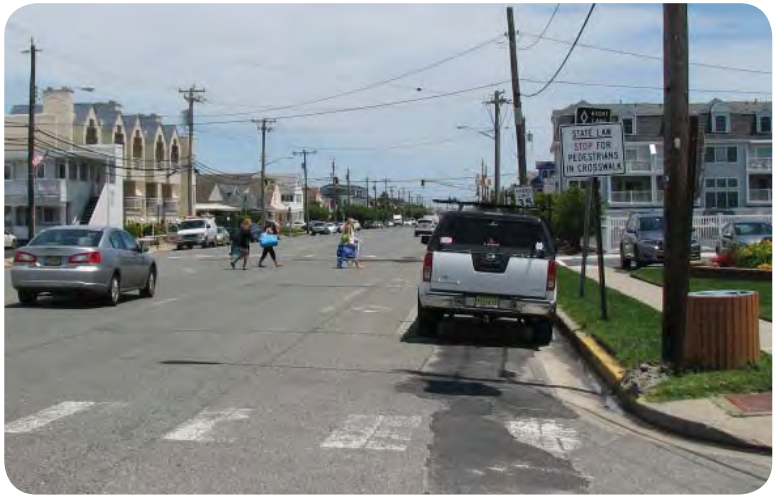
MARGATE







Multi-Lane Threat Condition



Pedestrians Crossing Atlantic Avenue

A dense network of side streets connect with Atlantic Avenue, with a mix of signalized and un-signalized intersections (see table below). Crosswalks are present at all four legged intersections, with varying styles through the study area (parallel, high-visibility, and mixed). At signalized intersections, the traffic equipment is outdated and pedestrian signal heads are only present at two intersection – Washington Avenue in Margate and Dorset Avenue. The pedestrian clearance time to cross Atlantic Avenue at some signals is based on a walking speed of 4.0 feet per second, which is higher than the 3.5 feet/second recommended in the Manual of Uniform Traffic Control Devices (MUTCD). The signals have also lost their progression over time and with it the ability to regulate traffic flow at a consistent speed.

	Total Intersections	Signalized Intersections	Un-Signalized Intersections
Atlantic Ave (Ventnor)	43	18	25
Atlantic Ave (Margate)	42	14	28

Crossing Atlantic Avenue on foot is particularly challenging at un-signalized intersections, where pedestrians have to navigate four lanes of moving traffic in one crossing and face the potential for a "multi-lane threat." This threat arises when a vehicle in one lane stops for the crossing pedestrian, but the vehicle in the other lane does not because the visibility of the pedestrian is blocked by the first vehicle. The difficulty in crossing is exacerbated by the tendency on Atlantic for vehicles to travel well in excess of the speed limit, which makes it harder for pedestrians to adequately judge gaps in traffic or stopping distances. In Margate, signalized intersections are converted to a yellow flashing mode in the off-season, which eliminates protected (i.e. signalized) intersections for pedestrians.

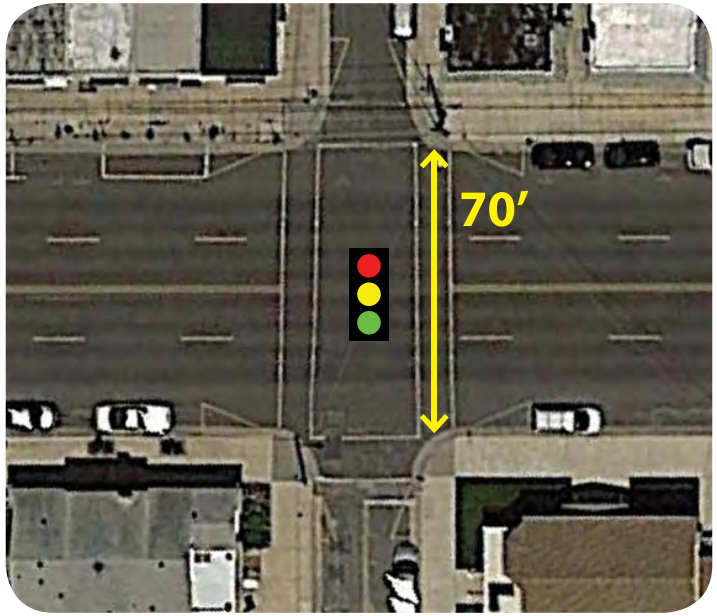
Figure 7: Pedestrian Crossings of Atlantic Avenue

Signalized Intersections:

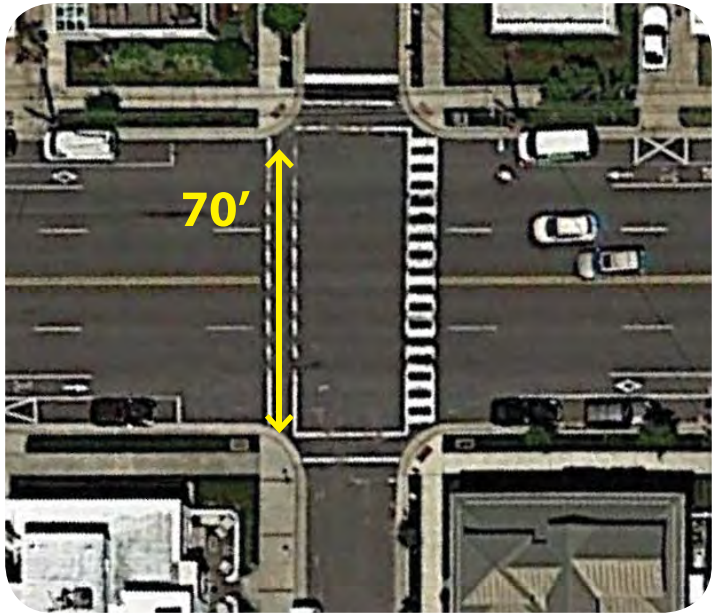
- Inadequate time for pedestrians to cross Atlantic Avenue
- Multiple conflict points with vehicles turning left onto Atlantic
- Operate in "flashing" mode in Margate off-season

Un-signalized Intersections:

- Multi-lane, uncontrolled crossings are not advisable at 35mph and current ADTs (multiple-threat)
- Multiple conflict points with vehicles turning left onto Atlantic



TYPICAL SIGNALIZED INTERSECTION



TYPICAL UN-SIGNALIZED INTERSECTION

Ventnor Avenue (CR 629)

Dorset Avenue (CR 629)

VENTNOR AVENUE (CR 629)

Ventnor Avenue is the primary commercial corridor in both Margate and Ventnor, with five distinct business districts spread along its length. Traffic signals are clustered in the business districts and also provided at intersections with major roads. Ventnor Avenue is 54' wide with one 19' wide travel lane and on-street parking in each direction. These excessively wide lanes increase exposure for pedestrians crossing the street and can also lead to cars passing each other within the lane. There are no bike facilities on Ventnor Avenue and bike parking is very limited.

In Margate, crosswalks are present at all of the signalized intersections and most of the un-signalized intersections. In Ventnor, crosswalks are present at signalized intersections but most of the un-signalized intersections are not marked. Where present, crosswalks are high-visibility type across Ventnor Avenue and parallel type across the side streets. Pedestrian features at the signalized intersections along Ventnor Avenue vary widely.

DORSET/WELLINGTON AVENUE (CR 629)

Dorset/Wellington Avenue is the primary entrance and exit route into Ventnor from the AC Expressway. Dorset Avenue has a 50' wide cartway with a travel lane and parking lane in each direction. Crosswalks are present at each of the intersections along Dorset Avenue (parallel style). Signalized intersections along Dorset Avenue do not have pedestrian signal heads. Wellington Avenue was resurfaced in 2015 with 12' wide travel lanes and a 14' wide center turn lane. The resurfacing project provided shoulders of varying width but did not include bicycle lanes.

At Edgewater Avenue, a bridge carries Dorset Avenue over the Intracoastal Waterway. The Dorset Avenue Bridge has an open metal grate surface that is a poor bicycling surface. This encourages many bicyclists to ride on the sidewalk, which is too narrow to comfortably accommodate people walking and biking and is signed for "foot traffic only." In addition, the crosswalk at Edgewater Avenue has poor visibility from Dorset Avenue.

JEROME AVENUE (CR 563)

Direct access to Margate from the mainland is provided via CR 563, which is called Jerome Avenue after passing through the private Downbeach Express toll booth into Margate. With a 76' wide cartway and five-lane cross-section, Jerome Avenue is the widest road in the study area. Jerome has a two-way center turn lane with two travel lanes and on-street parking in each direction. High-visibility crosswalks with countdown pedestrian signal headsare present at each of the signalized intersections. No bicycle facilities are provided along Jerome Avenue.

North of Fulton Avenue, which is the last signalized intersection before the Downbeach Express toll entrance, the Katz Jewish Community Center and Beth El Synagogue across the street generate routine mid-block pedestrian crossings. Similar to Atlantic Avenue, pedestrian crossings at un-signalized locations on Jerome Avenue are challenging due to the multi-lane threat combined with operating speeds that regularly exceed the 25 mph speed limit.

Dorset Avenue Bridge

Jerome Avenue (CR 563)

Monmouth Avenue

Local Street

MONMOUTH, WINCHESTER, AND AMHERST AVENUES

These three routes run parallel to Ventnor Avenue and are important travel routes through the study area. Monmouth and Winchester Avenue form a one-way pair, with each having a travel lane and on-street parking on both sides. Only a few intersections along Monmouth and Winchester Avenues are signal or stop-controlled – mainly near the schools – and most do not have marked crosswalks. The lack of stop control along Monmouth and Winchester encourages cut-through traffic and, combined with a lack of crosswalks, can lead to driver and pedestrian confusion over who has the right-of-way. Also, in the off-season when parking is lightly used, the perceived open width of the street can encourage higher speeds. Amherst Avenue is a two-way street with parking on both sides that traverses a nightlife district in Margate along the bay. Similar to Monmouth and Winchester Avenues, the street has very few signal or stop-controlled intersections or marked crosswalks.

LOCAL/NEIGHBORHOOD STREETS

Sidewalks are present on almost all local streets, except for a few residential neighborhoods closest to the bay. Aside from the bike lanes on Atlantic Avenue in Margate, there are no designated bicycle facilities on any roads within the study area. However, due to low traffic speeds and traffic volumes, the majority of local neighborhood streets are comfortable for bicycling without additional treatments.

WALKING AND BIKING TO LOCAL SCHOOLS

Both the Margate and Ventnor School Districts have adopted School Travel Plans that identify the primary school access routes for walking and biking, describe existing problem areas, and identify recommended improvements. The designated safe walking routes include Amherst Avenue, Huntington Avenue, Winchester Avenue, and Monmouth Avenue in Margate and Lafayette Avenue, Wyoming Avenue, Winchester Avenue, and Monmouth Avenue in Ventnor (see Figure 8).

The intersections of Fulton & North Huntington, Amherst & North Huntington, and Amherst& Gladstone were identified as "problematic intersections" in the *Margate School Travel Plan* due to their large pavement space, confusing geometry, and lack of pedestrian elements. Each intersection is skewed with multiple legs and large turning radii that enable high speed vehicle turns. They also lack pedestrian features including crosswalks, curb ramps, and signage on most legs.

In Ventnor, both Lafayette Avenue in front of the VECC and the Ventnor Gardens Plaza & Wyoming Avenue intersection were identified as problem areas. Lafayette Avenue is currently very wide (60') and the space is not well defined, which encourages higher vehicles speeds and makes it more difficult for crossing guards to manage the space. The Ventnor Gardens Plaza & Wyoming Avenue intersection is a gateway to the school and was identified as an area of concern in the *Ventnor School Travel Plan*, which stated that "the irregular configuration causes confusion among drivers, which creates potential hazards for walkers and cyclists." The existing intersection is skewed, with large turning radii that enable high speed vehicle turns, and only has pedestrian crosswalks on two of the four legs.

N. Huntington & Fulton Avenue Intersection

Aerial View of N. Huntington & Fulton

Figure 8: Primary School Access Routes

Bicycle & Pedestrian Crash Analysis

A crash analysis was performed to determine the location and extent of existing pedestrian and bicycle safety issues in the study area. Crash statistics were obtained from the Plan4Safety crash analysis system for a nine year period between January 1, 2005 and December 31, 2013. Within the study area, there were 240 reported crashes involving bicyclists and pedestrians, with 105 pedestrian crashes and 135 bicycle crashes (see Figure 9). These crashes resulted in 217 injuries and two fatalities. The total only includes crashes that were reported to police, and does not include incidents that were not reported or near misses.

SEASONAL DISTRIBUTION

Both cities experience dramatic increases in population during the summer months with a corresponding higher level of walking and biking activity. Of the 240 total crashes, just over half (51%) occurred during the summer months of June, July, and August (see Figure 10).

Figure 9: Summary of Bicycle & Pedestrian Crashes

	VENTNOR		MARGATE		TOTAL
Year	Bike Crashes	Ped Crashes	Bike Crashes	Ped Crashes	Bike/Ped Crashes
2005	10	5	3	4	22
2006	13	4	5	6	28
2007	9	6	11	5	31
2008	13	13	14	5	45
2009	5	7	4	3	19
2010	10	7	10	4	31
2011	7	6	3	3	19
2012	5	6	6	5	22
2013	6	7	1	9	23
Total	**78**	**61**	**57**	**44**	**240**
	139		**101**		

Figure 10: Seasonal Crash Distribution

Month	Bike/Ped Crashes	Portion of Year
January	5	2.1%
February	5	2.1%
March	7	2.9%
April	17	7.1%
May	22	9.2%
June	***31***	***12.9%***
July	***45***	***18.8%***
August	***47***	***19.6%***
September	18	7.5%
October	20	8.3%
November	12	5.0%
December	11	4.6%
Total	**240**	**100.0%**

CRASH CLUSTERS AND CORRIDORS

Bicycle and pedestrian crash locations are shown geographically in Figure 11 (symbols behind the crashes are used to indicate incapacitating and fatal crashes). Figure 11 also shows (and lists) the "Pedestrian Crash Intersections" and "Pedestrian Crash Corridors" from SJTPO's Network Screening Lists that are located in the study area. SJTPO's Network Screening Lists identify and rank the leading pedestrian crash intersections and corridors within the SJTPO four-county region.

Of the 240 total crashes, over two-thirds (68%) occurred along three major travel routes –Ventnor Avenue (85 crashes), Atlantic Avenue (57 crashes), and Dorset Avenue (21 crashes). On Ventnor Avenue, 36 crashes were clustered in a ¼ mile stretch between Sacramento and Dorset Avenues – which represents 15% of the total crashes in the study area. Another 12 crashes occurred between Surrey and Jackson Avenues. On Dorset Avenue, there were 21 crashes in a ½ mile stretch between Balfour and Ventnor Avenues (9% of the study area total). These three road segments in Ventnor account for nearly 30% of the study area crashes and form an SJTPO-designated Pedestrian Crash Corridor.

Crashes along Atlantic Avenue were distributed more evenly through the study area, with smaller clusters located at both signalized and un-signalized intersections in Margate and Ventnor. The crashes along Atlantic resulted in five incapacitating injuries and one fatality. SJTPO-designated Pedestrian Crash Intersections are located at Jefferson Avenue in Margate and Little Rock Avenue in Ventnor.

The remainder of crashes in the study area were concentrated on Monmouth and Winchester Avenues. In Margate, this includes a cluster of five bicycle crashes on Winchester Avenue near the Ross E.S. in Margate and two crashes near Tighe M.S. (resulting in one fatality and one incapacitating injury). On Winchester Avenue in Ventnor, 14 crashes were clustered in the ½ mile stretch between Troy and Cornwall Avenues.

POLICE CRASH REPORTS

Police crash reports (NJTR-1) were solicited from the Ventnor and Margate Police Departments for a six year period between 2010 and 2015. Of the 82 bicycle/pedestrian crashes during this period, only 32 crash reports were available. These reports were analyzed to determine the circumstances contributing for these crashes. In 12 of the 32 crashes (38%), the driver was either fully or partially at fault, with the main contributing circumstances being "careless driving" and "failure to yield right-of-way." In two of the 32 (6%) crashes, the bicyclist/pedestrian was at fault, with the contributing circumstances being "improper crossing" and "improper riding." No fault was assigned in the remaining cases. Bicyclists being struck by car doors was noted as a contributing factor in two crashes that occurred in the Atlantic Avenue bicycle lanes in Margate.

The Ventnor Police Department also provided police reports for crashes occurring on the boardwalk during the same six year period. During this time there were four reported incidents – two involved bicyclists that collided, one involved a pedestrian struck by a bicyclist, and one did not provide circumstances. This data does not include near-misses or actual crashes that were not reported to police.

Figure 11: Bicycle & Pedestrian Crashes, 2005-2013

Chapter 3: Stakeholder Outreach

Public involvement was an integral part of the plan's development and included coordination with state, county, regional, and local stakeholders. The study team worked with a steering committee to establish goals for the plan, understand issues and concerns within the study area, promote public outreach events, and develop bicycle and pedestrian improvement concepts. The team also solicited input from community members via two rounds of public meetings and an interactive study website. This section describes the stakeholder outreach process including associated input and findings.

Local Contact

Jim Rutala of Rutala and Associates, LLC, was the local project manager for this study and provided a key role in communications between NJDOT, the municipalities, and the study consultant. Mr. Rutala also coordinated times, dates, and locations for the steering committee and public meetings.

Steering Committee

At the onset of the project, a steering committee was formed to guide the study. The committee included administrative and elected officials from Ventnor and Margate; members of the Ventnor and Margate Police Departments, School Districts, Planning Boards, and Green Teams; and representatives from the Atlantic County Department of Regional Planning and Development (AC Planning), South Jersey Transportation Planning Organization (SJTPO), Cross County Connection Transportation Management Association (CCCTMA), Margate Business Association, and NJDOT. The three steering committee meetings held over the course of the project are summarized below (see meeting minutes in Appendix B for more details):

STEERING COMMITTEE MEETING #1 (9/21/2015)

A kickoff meeting was held to familiarize the steering committee with the project. Urban presented an overview of the study's scope, schedule, and data collection effort. This was followed by a discussion of the study's goals, which were defined as:

- Improving bicycle and pedestrian safety city-wide
- Facilitating walking/bicycling along and across major travel corridors
- Connecting Ventnor and Margate to the regional bicycle network
- Developing safe routes for children to walk and bike to school
- Improving walking and biking conditions on the boardwalk

The remainder of the meeting focused on specific needs, concerns, and opportunities related to bicycle and pedestrian safety and circulation in the study area.

STEERING COMMITTEE MEETING #2 (2/19/2016)

Urban presented an overview of the data collection effort, summarized input from the study website, and presented preliminary bicycle and pedestrian improvement concepts. Members of the steering committee provided feedback on the preliminary concepts and discussed logistics for an initial round of public meetings in March 2016.

STEERING COMMITTEE MEETING #3 (6/22/2016)

Urban presented the preliminary bicycle and pedestrian plan to the steering committee and received input on the draft plan. The group also discussed logistics for the final round of public meetings in August 2016.

Public Meetings

Two rounds of public meetings were held to involve community members in the study's planning process. For each round, back to back meetings were scheduled in Ventnor and Margate. Meetings were advertised using local media outlets (including the Downbeach Buzz, Atlantic City Press, Margate Business Association website, and Sustainable Downbeach Facebook page) along with flyers that were posted in the municipal buildings. Advertisements and other press materials related to these events are included in Appendix C.

PUBLIC MEETING #1 (MARCH 2016)

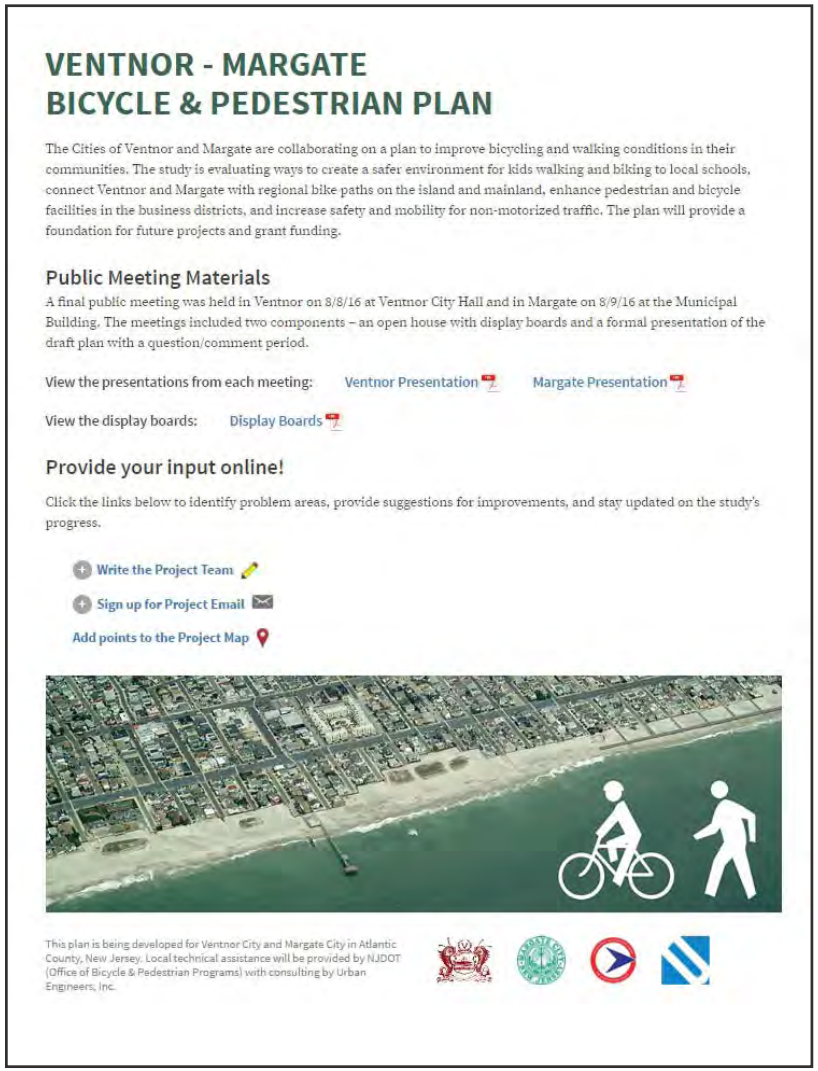
The first round was held in March 2016 during the concept development phase to obtain feedback from the community on initial concepts. The Margate meeting was held on March 29 in the Municipal Building Public Meeting Room, while the Ventnor meeting was held on March 30 in the VECC auditorium. Combined, the meetings had over 100 attendees. At each meeting, Urban delivered a presentation covering the project background, an analysis of existing conditions, and preliminary improvement concepts. Display boards were also available for viewing and discussion. Attendees were given an opportunity to ask questions at the meeting and also submit comments (in person or online). Below are common themes from the 36 submitted comments:

- Improve conditions/safety on Atlantic Ave:
  - *Need safer pedestrian crossings*
  - *Don't remove parking – too valuable*
  - *Lower the speed limit*
  - *Need traffic signal improvements*
- More education/enforcement needed for all modes
- Local support for improved bicycle facilities on Monmouth and Winchester Avenues
- Explore options for a beach path in Margate

PUBLIC MEETING #2 (AUGUST 2016)

The second round was held in August 2016 to present the draft plan to the public for comment. The Ventnor meeting was held on August 8 in the City Hall Meeting Room, while the Margate meeting was held on August 9 in the Municipal Building Public Meeting Room. Combined, the meetings had approximately 70 attendees. At each meeting, Urban delivered a presentation with a brief recap of the project background followed by an overview of the major components of the draft plan. Display boards were also available for viewing and discussion. Attendees were given an opportunity to ask questions at the meeting and also submit comments (in person or online). A press article about the meeting documenting comments from some of the attendees is included in Appendix C.

Public Meeting #1 in Margate



STUDY WEBSITE SCREENSHOT

STUDY WEBSITE WITH INTERACTIVE COMMUNITY MAP

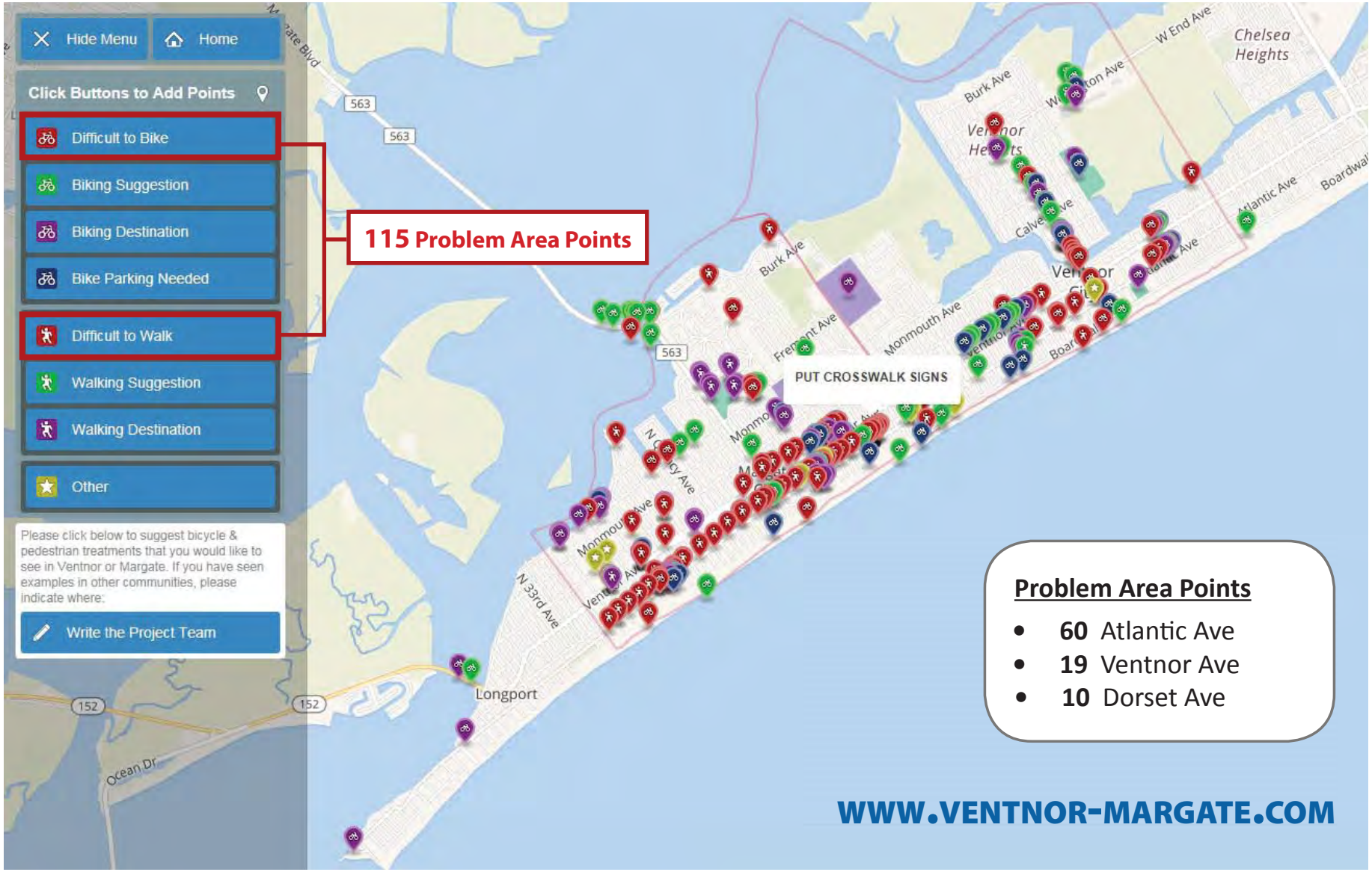
A website was developed specifically for this planning effort. It was launched in September 2015 and kept operational through the duration of the study. Along with an overview of the project, the site displayed meeting announcements and provided links to meeting materials.

The site also featured an interactive community map that allowed members of the public to "mark the map" with walking/biking destinations, difficult areas to walk/bike, suggestions for walking/biking improvements, and areas where bike parking is needed. At the end of the second round of public meetings, a total of 279 markers had been placed. Of the 115 markers identifying problem areas, the majority were along Atlantic Avenue (60 markers), followed by Ventnor Avenue (19 markers) and Dorset Avenue (10 markers). Figure 12 shows a screenshot of the interactive online map at the end of the study.

Written comments could also be submitted via the website. Below are common themes from the 127 submitted comments (number of instances in parentheses):

- More education and enforcement across all modes (19)
- Road diet on Atlantic Avenue (11 for and 6 against)
- Extend Margate bike lanes into Ventnor (10)
- Walking across Atlantic Avenue can be challenging (7)
- Comments related to the Ventnor boardwalk (7)
- "Daylighting" is needed to make intersections safer (6)
- "Dooring" is a serious concern for bicyclists (5)

Figure 12: Interactive Community Map



Summary of Bicycle & Pedestrian Issues

Input from the existing conditions analysis, steering committee meetings, first round of public meetings, and study website were combined to develop the following list of bicycle and pedestrian issues (grouped by focus area):

VENTNOR BOARDWALK

- Speed differential between people walking and biking on boardwalk creates potential for crashes and near misses
- Bicycle hours are not consistent with Atlantic City, i.e. the boardwalk in Ventnor does not allow riding at night
- Lack of bicycle parking at entrance points

MARGATE BEACH ACCESS

- Need for improved pedestrian connections on major access streets, in particular those with off-street parking (such as Decatur Avenue)
- Lack of bicycle parking at entrance points

ATLANTIC AVENUE

- Multiple crashes at many of the signalized and un-signalized intersections
- Vehicles exceeding the speed limit
- Lack of pedestrian features at signalized intersections
- Multi-lane threat at un-signalized crossing locations
- No provision for bike travel
- Dooring incidents in Margate bike lanes
- Unsafe/distracted behavior across all modes – walking, biking, and driving

VENTNOR AVENUE

- Several high-crash locations are located within the corridor
- Excessively wide travel lanes increase pedestrian exposure and allow cars to pass each other in the lane
- No provision for bike travel
- Lack of bicycle parking in business districts

DORSET AVENUE

- Safety issues associated with Dorset Avenue Bridge – high crash location
- Open metal grate bridge surface is incompatible with bicycling
- Poor sight distance at intersection with Edgewater Avenue
- No provision for bike travel

JEROME AVENUE

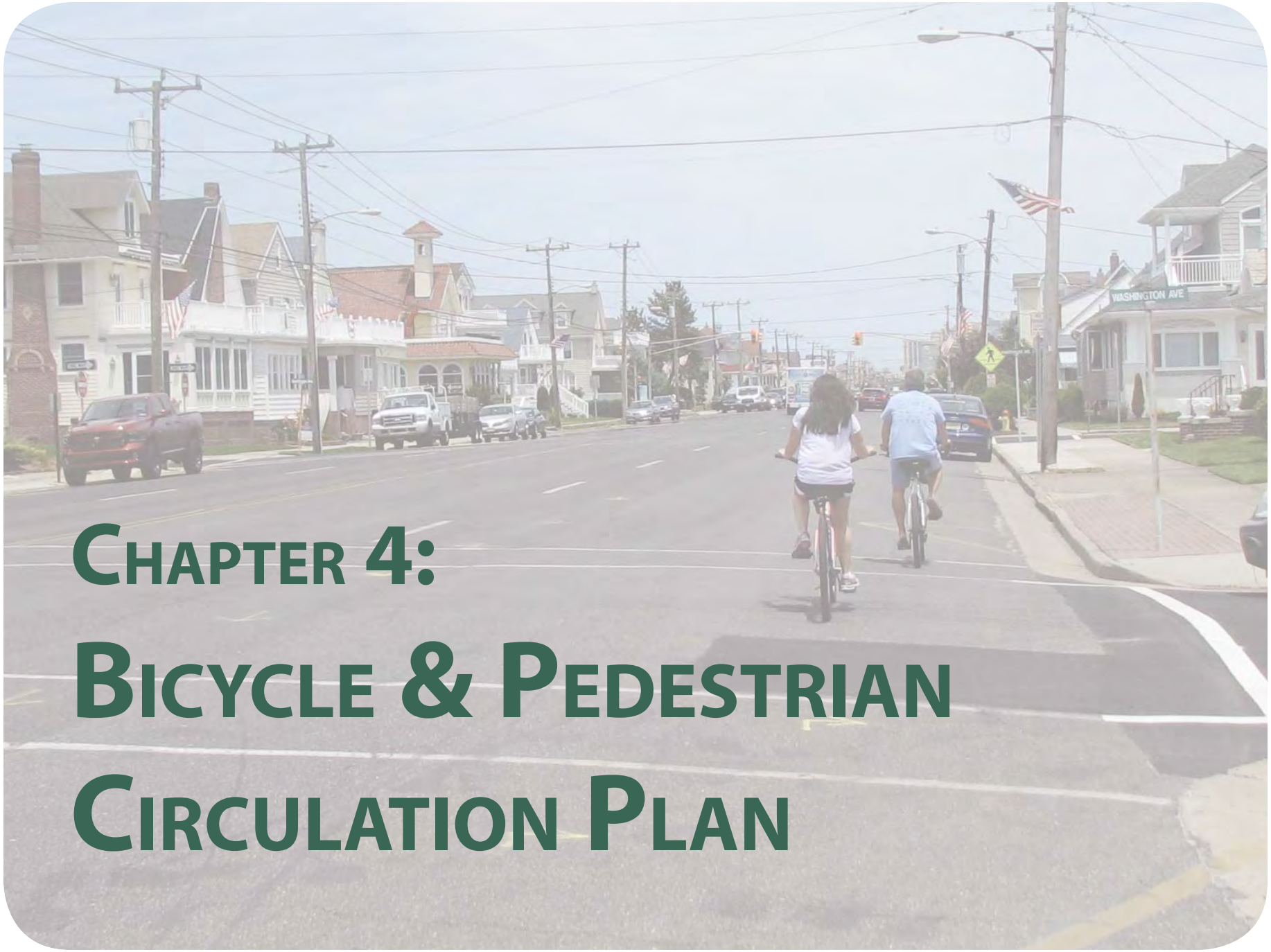
- Vehicles exceeding the speed limit
- Multi-lane threat at un-signalized and midblock crossing locations near major activity generators
- No provision for bike travel

MONMOUTH/WINCHESTER/AMHERST AVENUES

- Crash history on Winchester and Monmouth Avenues
- Lack of stop control may facilitate cut-through traffic
- Crosswalks at most intersections are not marked

SCHOOL ACCESS

- Large and/or complex intersections that are intimidating to cross on foot
- Lack of safe bicycle routes to schools



Chapter 4: Bicycle & Pedestrian Circulation Plan

The recommendations presented in this chapter are intended to create a comprehensive bicycle and pedestrian network for the study area that enhances non-motorized safety and mobility and promotes access to local and regional destinations in Ventnor and Margate. The plan has five individual components:

1. Pedestrian Improvement Plan
2. Bicycle Network Plan
3. Focus Areas
4. Safe Routes to School
5. Policy & Program Recommendations

The Pedestrian Improvement Plan and Bicycle Network Plan components are framework plans covering the entire study area. While presented individually, in reality these components work together to create an integrated bicycle and pedestrian network.

The Focus Areas component addresses major travel corridors and key areas within Ventnor and Margate where a higher level of evaluation was necessary to address bicycle and pedestrian issues. The Safe Route to School component addresses specific problem areas along the primary school walking routes, while the Policy & Program Recommendations component focuses on the non-engineering solutions.

Also, while land use is not specifically addressed in the plan, the integration of bicycle and pedestrian considerations into future land use development decisions would further advance the goals of this plan.

The concepts and recommendations presented in this chapter were developed in accordance with current design guidance, including the *Guide for the Development of Bicycle Facilities, 4th Edition (AASHTO, 2012), the Guide for the Planning, Design, and Operation of Pedestrian Facilities (AASHTO, 2004 and 2010 update), Designing Walkable Urban Thoroughfares: A Context Sensitive Approach (ITE, 2010),* and the *NACTO Urban Bikeway and Street Design Guidelines*.

Recommendations are also consistent with the *Manual on Uniform Traffic Control Devices (FHWA, 2009),* which is the standard for signs, signals, and pavement markings in the United States. Implementation of many of the recommendations will require engineering studies to further refine design elements.

1. PEDESTRIAN IMPROVEMENT PLAN

The main objective of the pedestrian improvement plan (shown in Figure 13) is to develop a continuous network of safe and convenient pedestrian facilities that encourages residents and visitors to walk to and from local destinations. The Pedestrian Improvement Plan contains several categories of improvements:

Corridor-wide Pedestrian Improvements

Strategies were developed to make it safer, more convenient, and more attractive to walk along and across the major pedestrian corridors in Ventnor and Margate. These corridors include Atlantic Avenue, Dorset Avenue (between Ventnor and Balfour), Amherst Avenue (between 36th and Washington), Washington Avenue (in Margate), and the business districts along Ventnor Avenue (see Figure 13). The strategies described below will also help to calm traffic, improve visibility for all road users, and enhance the business environment.

- ***Curb Extensions at Major Crossing Locations***

Curb extensions improve conditions for pedestrians by shortening the crossing distance and increasing visibility between motorists and pedestrians, while also helping to manage traffic speeds. Another benefit of curb extensions is that they provide additional sidewalk space, which is particularly important in business districts along Ventnor Avenue where sidewalk space is limited but in high demand. This extra space can be used for sidewalk furniture, bicycle parking, and/or "green infrastructure" elements such as storm water infiltration and street trees. Curb extensions are most effective when installed at sidewalk elevation, but can also be implemented using paint or textured surfaces combined with vertical elements such as flexible bollards or planters. These treatments can be particularly useful to implement curb extensions on an interim or trial basis.

Curb Extension (Curbed)

Curb Extension (Painted)

Figure 13: Pedestrian Improvement Plan

- ***Parking Restrictions at Intersections to Improve Pedestrian Visibility***

When vehicles are parked (or are idling) too close to pedestrian crossings, they limit the sightlines of both pedestrians and motorists, which can increase the risk of crashes. Restricting parking and other sight obstructions adjacent to crosswalks – also known as intersection "daylighting" – helps pedestrians to safely cross the street by providing motorists with a clearer view of pedestrians and pedestrians with a clearer view of oncoming vehicles. New Jersey state law requires that vehicles not be parked within 25 feet of an intersection (or 50 feet from a stop sign); however, this requirement is not always followed. A variety of treatments can be used to encourage better parking behavior including painting the curb, roadway striping (box or triangle), flexible bollards, and curb extensions. While low cost treatments such as paint or striping may be effective in some areas, in others it may be necessary or desirable to provide physical roadway measures such as flexible bollards or curb extensions to prevent motorists from parking too close to the crosswalk. Flexible bollards and curb extensions can be combined with bicycle parking to provide an additional benefit.

- ***Consistent, High-visibility Crosswalk Markings***

Good crosswalk design is an important component of creating pedestrian-friendly intersections. High visibility crosswalks – often referred to as "continental" or "ladder-style" crosswalks – are more visible to drivers than two parallel lines and are recommended for the primary walking corridors listed above. All crosswalks should be aligned to best match likely pedestrian travel paths, and all legs of an intersection should have the same type of marking. Crosswalks in areas with high pedestrian volumes should have a minimum width of 10 feet, which allows for comfortable bi-directional pedestrian travel. In business districts and at other gateway intersections, treatments such as brick pavers or textured surfaces can be considered to further emphasize a pedestrian-oriented environment.

- ***Pedestrian Upgrades at Signalized Intersections***

Addressing deficient conditions at signalized intersections is an important component of improving pedestrian safety. Full signal upgrades are recommended at intersections along Atlantic Avenue, Ventnor Avenue, and Dorset Avenue where existing signals lack full or partial pedestrian features. The CR 629 Signal Optimization Project also recommended full upgrades at all traffic signals along Ventnor Avenue. Upgrades should include high-visibility crosswalks, ADA-compatible curb ramps, countdown pedestrian signal heads, and No Turn on Red (R10-11 in MUTCD) signage at all approaches. The No Turn on Red signage recommendation, per MUTCD, is based on the potential for pedestrian conflicts with right-turn-on-red maneuvers.

- ***Pedestrian Crossing Improvements at Un-signalized Intersections***

Providing safe and convenient crossing opportunities is an essential component of pedestrian circulation. Simply put, pedestrians should have the opportunity to cross the road safely. Several treatments can be used to improve safety at un-signalized pedestrian crossing locations. These measures include high-visibility crosswalk striping, In-Street Pedestrian Crossing signs (R1-6a), Pedestrian Warning Signs (W11-2), textured crosswalks, curb extensions, pedestrian refuge areas, and Rectangular Rapid Flashing Beacons (RRFBs). At locations with higher vehicle speeds/volumes and/or multiple lanes in each direction, a higher level of control is desired to stop vehicles and provide additional protection for pedestrians. Types of intersection control include Pedestrian Hybrid Beacons (PHBs), pedestrian-actuated traffic signals, and full traffic signals.

Textured Crosswalk with In-Street Pedestrian Crossing Sign

Intersection Daylighting

(source: www.togethernorthjersey)

Pedestrian Hybrid Beacon

(source: KXAN, Texas)

High-visibility Crosswalk with Pedestrian Warning Sign

Rectangular Rapid Flashing Beacon

(source: www.pedbikeimages.org/mf)

Pedestrian Refuge Areas

(source: GoogleEarth)

- ***Automatic "WALK" Signals at Intersections with Routine Pedestrian Activity***

Pedestrian signal heads can be pedestrian-actuated through the use of pedestrian pushbuttons (PPBs). The use of PPBs often results in longer waits for people trying to cross the street, as they may miss a cycle if they fail to push the button in time. Studies have also shown that compliance with PPBs is low – roughly 50 percent of pedestrians at intersections do not activate pushbuttons to cross at the intersection. An alternative is to provide automatic "WALK" signals at traffic signals (also referred to as pedestrian recall). Pedestrian recall gives pedestrians a "WALK" signal at every cycle, and thus no pushbutton or detection is necessary.

Pedestrian recall is appropriate in business districts and areas with routine pedestrian activity, which include Ventnor Avenue and Atlantic Avenue. It can be used for the entire day, or limited to parts of the day with the busiest pedestrian activity. As an example, the City of Boston's policy is for the pedestrian phase to be automatic during every cycle at locations where pedestrians are present more than 50 percent of the time during peak hours, or where studies indicate reasonable benefit (source: FHWA website, www.pedbikesafe.org).

- ***Streetscape Improvements***

Streetscape improvements are recommended for the commercial nodes along Ventnor Avenue, Atlantic Avenue, Amherst Avenue, and Dorset Avenue (shown in blue on Figure 13). Streetscape improvements such as pedestrian-scale lighting, sidewalk improvements, wayfinding signage, and street trees help to create a better walking experience and sense of place, while also improving pedestrian safety by softening the appearance of the roadway, calming traffic, and making bicyclists and pedestrians more visible. Street trees have been documented to provide a number of general benefits (e.g. increased property values, stormwater management, aesthetics) as well as benefits directly related to walking and biking (e.g. reduced air and noise pollution, traffic calming, protection from the elements).

Additional Pedestrian Crossing Improvements

This section addresses portions of the study area that are not covered by the corridor-wide pedestrian improvements. Figure 12 shows three categories of crossing improvements: (1) geometric improvements at existing crossings, (2) new un-signalized crossing locations, and (3) new signalized crossing locations.

GEOMETRIC IMPROVEMENTS AT EXISTING CROSSINGS

Enhanced treatments and geometric improvements are recommended at ten intersections (listed below) in the study area. Specific improvements for each location are presented under the Safe Routes to School and Focus Area components.

- N. Huntington Avenue at Lagoon Drive (Margate)
- N. Huntington Avenue at Marshall Avenue (Margate)
- N. Huntington Avenue at Fulton Avenue (Margate)
- N. Huntington Avenue at Amherst Avenue (Margate)
- N. Gladstone Avenue at Fulton Avenue (Margate)
- N. Gladstone Avenue at Amherst Avenue (Margate)
- Lafayette Avenue at Essex Court (Ventnor)
- Lafayette Avenue at Fulton Avenue (Ventnor)
- Wyoming Avenue at Calvert Gardens Plaza (Ventnor)
- Dorset Avenue at Edgewater Avenue (Ventnor)

NEW UN-SIGNALIZED CROSSINGS

Based on public input, site observations, and crash analysis, new un-signalized pedestrian crossings are recommended at six locations (listed below) to accommodate pedestrian desire lines. Each location should be evaluated individually to determine the appropriate treatment.

- Jerome Avenue (CR 563) at Wellington Avenue (Margate)
- Jerome Avenue (CR 563) at Fremont Avenue (Margate)
- Ventnor Avenue (CR 629) at N. Cornwall Avenue (Ventnor)
- Ventnor Avenue (CR 629) at N. Derby Avenue (Ventnor)
- Ventnor Avenue (CR 629) at N. Dudley Avenue (Ventnor)
- Lafayette Avenue at Fulton Avenue (Ventnor)
- Wellington Avenue (CR 629) at Suffolk Avenue (Ventnor)

NEW SIGNALIZED CROSSINGS

The intersection of Atlantic Avenue and Washington Avenue in Ventnor is a major pedestrian access route to the southern end of the boardwalk, but is spaced several blocks away from the closest signal in each direction. A traffic signal is recommended to provide a protected crossing at this location. In Margate, a traffic signal is recommended at Madison Avenue and Ventnor Avenue, where the Margate Dairy Bar generates significant walking trips. This location would complement the signal spacing on Atlantic Avenue. At both of these locations, an engineering study would be needed to determine if warrants specified in the Manual of Uniform Traffic Control Devices (MUTCD) can be met.

Sidewalk Improvements

Ventnor and Margate both have an extensive network of continuous sidewalks throughout the city limits. Within this network, two sidewalk segments were identified as priority missing links:

- **Wellington Avenue**: The sidewalk along Wellington Avenue currently ends at Littlerock Avenue and does not extend to into the Ventnor Shopping Plaza. New sidewalk is recommended to accommodate people walking to the plaza from the adjacent residential neighborhood.
- **Ventnor Avenue**: The parkway section of Ventnor Avenue between N. Wilson Avenue and N. Mansfield Avenue in Margate does not have sidewalks on the inner drive where the NJ TRANSIT bus stops are located. Sidewalk segments should be added to connect these bus stops with the adjacent intersections.

Shared Use Paths

Recommendations for new shared use paths are covered under the Bicycle Network Plan component.

2. BICYCLE NETWORK PLAN

Figure 14 shows the recommended bicycle network plan for Ventnor and Margate. Each link within the bicycle network plan is color-coded according to the recommended facility type, which include three categories: Shared Lane Markings, Bicycle Lanes, and Shared Use Paths. The plan was developed to connect major destinations within the study area and make bicycling a viable alternative for citywide travel, as well as connect with the regional bicycle network. Desired bicycle routes were identified based on the location of activity generators and stakeholder input. Specific facility types for each identified route were determined based on street characteristics – curb-to-curb widths, posted speed limits, and traffic volumes – combined with stakeholder input.

SHARED LANE MARKINGS

Shared lane markings (commonly referred to as "sharrows") are appropriate on streets where the posted speed limit is low enough to accommodate bicyclists and motor vehicles in the same lanes (30 mph or less). They are useful in situations where providing separate facilities for cyclists is difficult due to insufficient width. Shared lane markings on the pavement increase the visibility of cycling along a street and provide guidance to the cyclist on the proper location to ride. Similar to bike lane symbols, sharrows should be placed after each intersection and then spaced as required in the MUTCD. Shared lanes markings are recommended for the following streets and corridors:

- *Adams Avenue*
- *Amherst Avenue (between Washington and Coolidge)*
- *Balfour Avenue*
- *Clermont Avenue*
- *Delavan Avenue*
- *Dorset Avenue (between bridge and Atlantic Ave)*
- *Jefferson Avenue*
- *Lagoon Drive / Bayshore Drive / Swathmore Ave*
- *Monmouth Avenue*
- *Winchester Avenue*
- *Wyoming Avenue*

SHARED LANE MARKINGS

W11-1*

W16-1P

Figure 14: Bicycle Network Plan

BIKE LANES

Bike lanes are portions of the roadway that are reserved for the exclusive use of bicycles through designated signage, striping, and pavement markings. They decrease the stress level for bicyclists by providing a dedicated riding space and increasing the predictability of bicycle and motor vehicle movements. Bike lanes can be directional with traffic on each side of the street, or combined into a two-way facility on one side (referred to as a separated bikeway or cycle track).

Bike lanes should have a minimum width of 5' on curbed roadways; wider lanes are often desirable on streets with higher traffic speeds and volumes, a high percentage of heavy vehicles, on-street parallel parking, and/or relatively steep inclines. With lanes that are 7' or wider, a minimum 2' wide buffered area can be striped to further separate bike traffic from motor vehicle traffic and/or the door zone of parked vehicles. When bike lanes are placed next to parking, these buffered areas enable bicyclist to ride outside of the "door zone" where drivers enter and exit vehicles. Drainage grates can also pose a hazard for cyclists if the openings are parallel to the direction of travel. Bicycle safe drainage grates should be installed or retrofitted on all roads, but particularly those with bike lanes.

Bike lanes are recommended for the following streets:

- *Atlantic Avenue*
- *Dorset Avenue (between bridge and bay)*
- *Jerome Avenue*
- *Ventnor Avenue*
- *Wellington Avenue (between Dorset and AC border)*

BIKE LANES

BUFFERED BIKE LANES

SEPARATED BIKEWAY

SHARED USE PATHS

Shared use paths (also referred to as "multi-use trails") provide a dedicated pathway for bicycles and pedestrians that is physically separated from motor vehicle traffic. These facilities can be placed along roadways, through parks, or along other rights of way such as rail corridors or beachfronts. Shared use paths should be a minimum of 10' wide to accommodate bi-directional traffic, but additional width is necessary in areas with high bicycle and pedestrian demand. In congested areas, centerline striping can help clarify the direction of traffic and organize pathway traffic. Signage can also be used to remind bicyclists to yield to pedestrians and pass on the left, and remind slower users to keep right (a variety of sign options are provided in Part 9 of the MUTCD).

Figure 14 shows the proposed shared use paths for the study area. Paths are shown near the Tighe Middle School in Margate and in unpaved utility corridors along the Wellington Avenue and Fredricksburg Avenue right-of-ways. A shared use path is also recommended as a potential option for Margate's beachfront (discussed in more detail under Focus Areas).

Shared Use Path in Highlands, NJ

Beach Path in N. Wildwood, NJ

Bicycle Parking Plan

Bicycle parking is important at activity generators including businesses, schools, transit stops, public facilities such as libraries or recreation centers, and other employment centers. Secure, well-lit bicycle parking located close to building entrances and transit entry points can make bicycling more attractive, and also reduces the risk of bicycle damage or theft.

A bicycle parking plan was developed to address the demand for bicycle parking throughout the study area. The 21 priority locations shown in Figure 15 were determined based on public input to the study website, activity generators, and site visits. Additional locations may be warranted based on local demand.

Bicycle parking can be provided in the form of bike racks and corrals, or more secure facilities such as bike shelters and lockers. Bike racks are relatively low cost, have a small footprint, and can be customized to match or enhance local aesthetics. Bike corrals have a larger footprint and provide storage for multiple bicycles. Bike shelters provide secure, covered protection for multiple bicycles, while bike lockers provide added protection from theft by using an enclosed storage space.

INVERTED "U" RACK

BIKE CORRAL

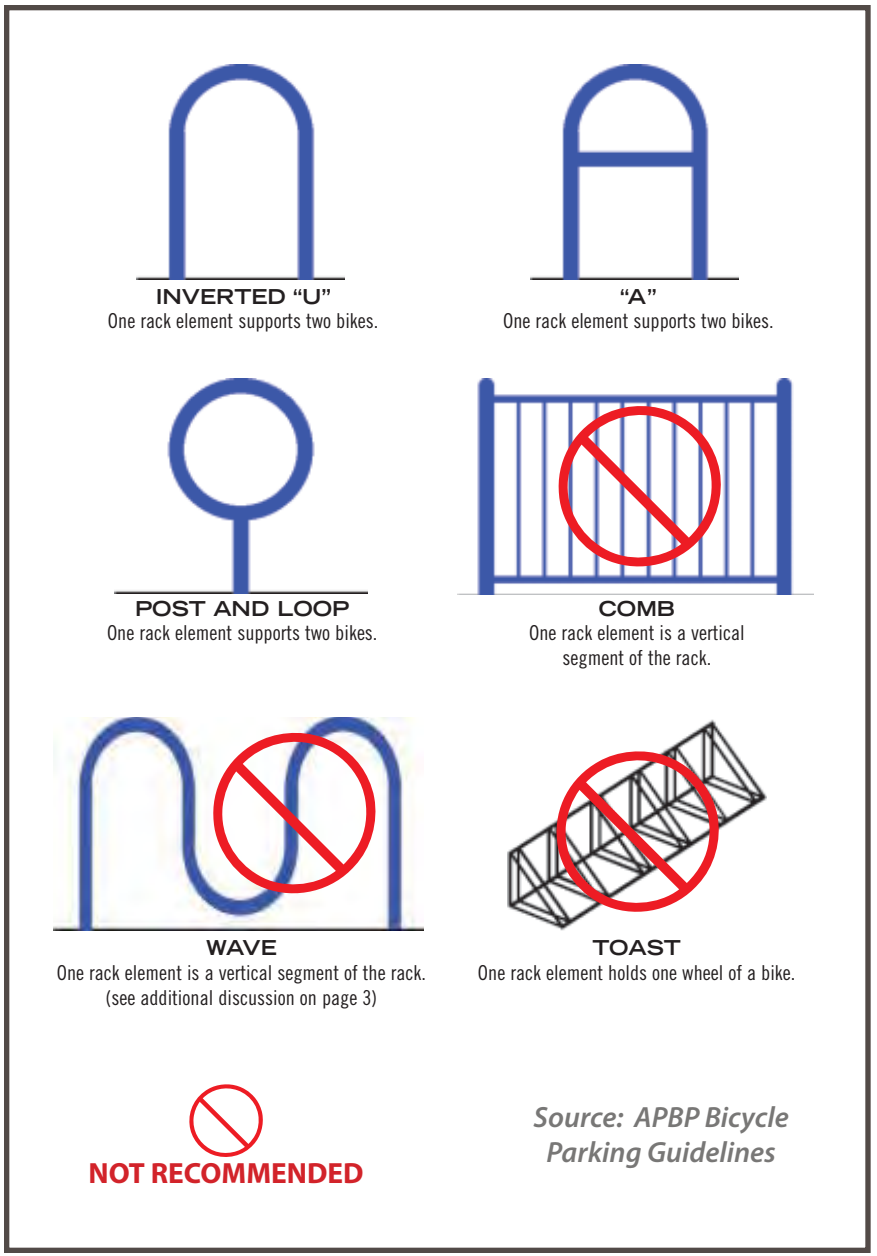
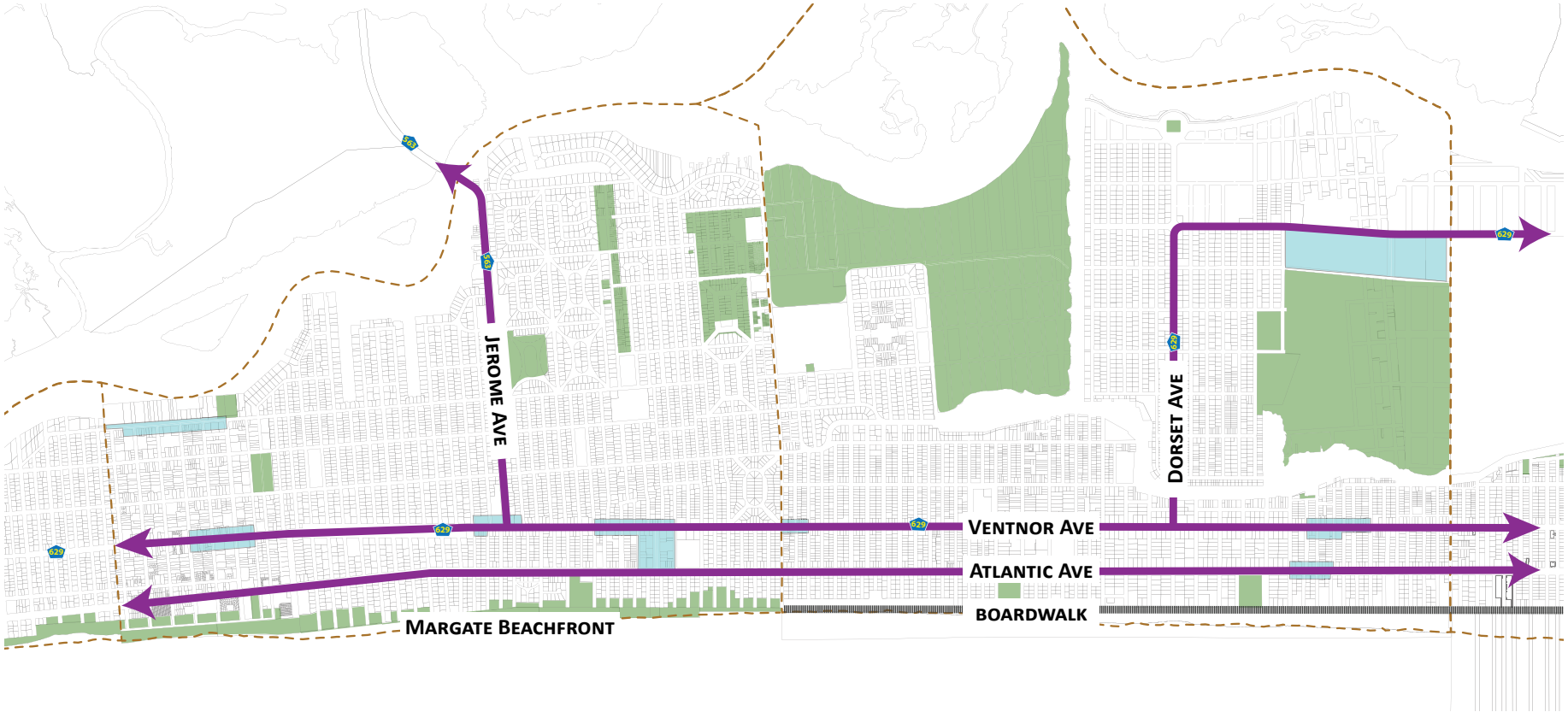


Figure 15: Bicycle Parking Plan

3. FOCUS AREAS

This section covers the major travel corridors and key areas within Ventnor and Margate where a higher level of evaluation was necessary to comprehensively address issues related to both biking and walking (locations are shown in Figure 16). Concept plans were developed for some of these areas to graphically depict the recommended bicycle and pedestrian treatments.

Figure 16: Focus Areas



EXAMPLES OF PATH ADVISORY SIGNS

EXISTING	
PEAK (6/30 TO LD)	6 AM TO 12 PM (WE) DAYLIGHT HOURS (WD)
OFF-PEAK (LD TO 6/30)	DAYLIGHT HOURS

→

PROPOSED	
PEAK (6/30 TO LD)	6 AM TO 12 PM (WE) ALL HOURS (WD)
OFF-PEAK (LD TO 6/30)	ALL HOURS

RECOMMENDED BICYCLE HOURS OF OPERATION

Ventnor Boardwalk

The boardwalk is a tremendous asset to the City of Ventnor; however, several issues were identified related to conflicts between pedestrians/bicyclists and bicycle hours of operation. With a 14' effective clear width, the boardwalk is currently not wide enough to designate separate walking and biking lanes. Widening the boardwalk to provide sufficient space for designated bicycle and pedestrian zones should be considered.

During peak periods, the boardwalk should serve low-speed recreational bicycle trips, with the adjacent street network serving bicyclists desiring to ride at higher speeds. The following modifications are recommended to increase the boardwalk's usefulness for biking while at the same time reducing potential conflicts:

- Advisory signs should be added along the boardwalk to reinforce its role as a recreational bike route. At a minimum, signage should remind bicyclists to yield to pedestrians and pass on the left, encourage bicyclists to ride at appropriate speeds for a shared facility, and remind slower users to keep right. A variety of sign options are provided in Part 9 of the MUTCD. The signs can be developed in a context-sensitive manner using a unique theme that matches the local environment, as has been done in other communities.

- The bicycling hours of operations should be expanded to allow 24-hour per day bicycle access for the entire off-peak period (Labor Day to June 30) and on weekdays in the peak season. This would achieve better consistency between the Ventnor and Atlantic City boardwalks and help to expand accessibility to the regional bicycle network.

N. Wildwood, NJ

Venice Beach, CA

Beach Path Construction in N. Wildwood

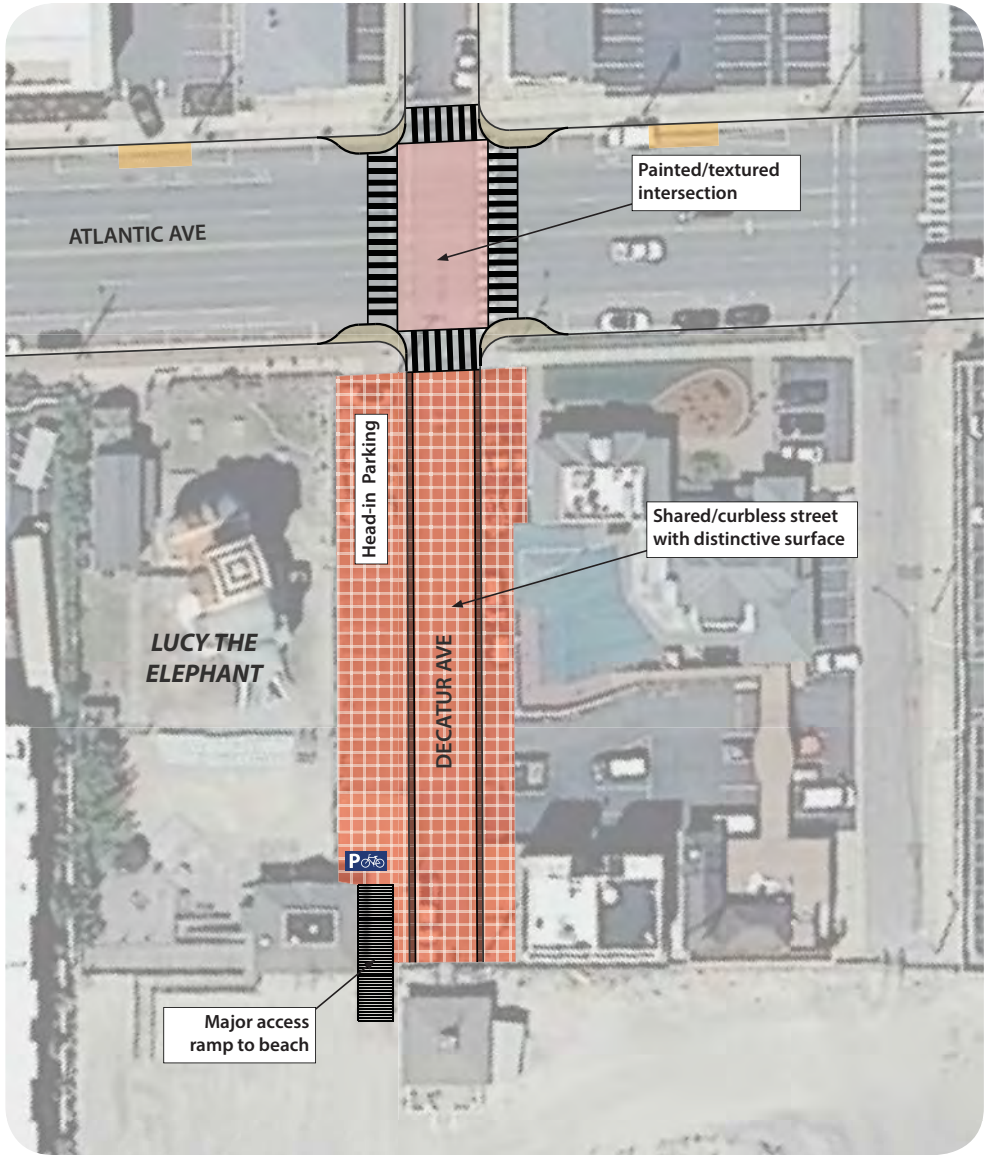
Example of Wheel Well

Margate Beach Access

Strategies were developed to improve access to and along the beach in Margate. A shared use path along Margate's beachfront would provide a place for people to bike away from traffic and would provide a regional recreational route along Absecon Island connecting to the Ventnor and AC boardwalks. Shared use paths have been implemented in similar conditions regionally and nationally, with both concrete and asphalt being used for the trail surface. A good local example is the ½ mile long concrete beach path in North Wildwood that is situated between Beach Drive and the dunes. At beach access points where only stairs are present, wheel wells can provide access for bicyclists. Another potential solution is to extend the Ventnor boardwalk into Margate.

The plan also evaluated ways to improve conditions on major beach access streets for walking and biking. For example, Decatur Avenue draws many people towards the beach with its wide entrance ramp and Lucy the Elephant, but does not have sidewalks due to space limitations imposed by off-street parking for adjacent land uses. Figure 17 presents a concept plan for reconfiguring Decatur Avenue into a shared street. Shared streets are typically curb-less and feature a distinctive surface that is shared by pedestrians, bicyclists, and vehicles. These streets are designed to create a low-speed, pedestrian-oriented environment that maintains access for vehicles and parking operations. The concept plan for Decatur Avenue would transform the street into a major gateway to the beach, and also provide an opportunity to better integrate the street with adjacent business operations (for instance outdoor seating or periodic events.

Figure 17: Decatur Avenue Concept Plan



EXISTING CONDITIONS

POTENTIAL TREATMENTS

Atlantic Avenue

Atlantic Avenue presents major challenges for bicyclists and pedestrians, as evidenced by both technical analysis and local stakeholder feedback. Two sets of recommendations were developed to improve conditions on Atlantic Avenue: (1) operational recommendations that would provide modest benefits and could be implemented fairly quickly, and (2) corridor re-design options that comprehensively address bicycle and pedestrian needs along Atlantic Avenue.

OPERATIONAL RECOMMENDATIONS

The following recommendations address operational deficiencies related to existing traffic signals, signage, and striping on Atlantic Avenue:

- Provide adequate time for pedestrians to cross at a walking speed of 3.0 or 3.5 feet/second
- Implement consistent crosswalk markings (high-visibility type on all approaches)
- Reduce travel lane widths in Margate from 11' to 10' to provide space for a 2' wide buffer between parked cars and the bike lane (see Figure 18)
- Extend buffered bike lanes into Ventnor by reducing lane widths to 10'
- Explore GPS-based time clocks as a way to achieve traffic signal synchronization and maintain an operating speed of 25 mph using the existing controllers
- Institute a speed limit reduction from 35 mph to 25 mph
- Eliminate the flashing yellow operations in Margate during the off-season

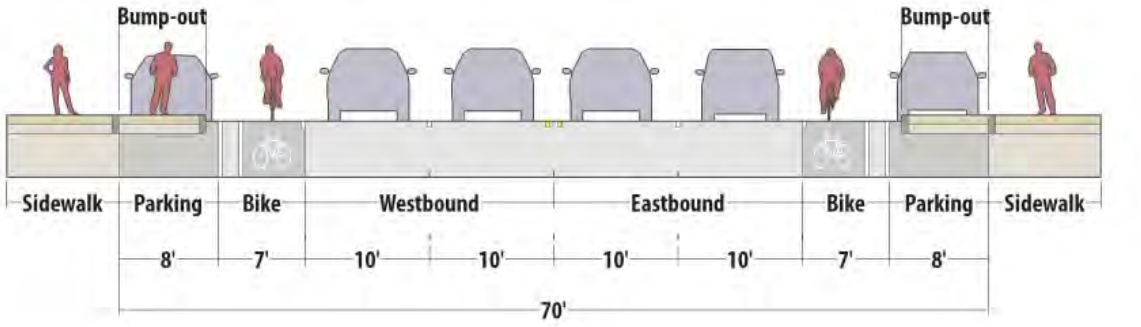


Figure 18: Buffered Bike Lanes on Atlantic Avenue

CORRIDOR REDESIGN OPTIONS

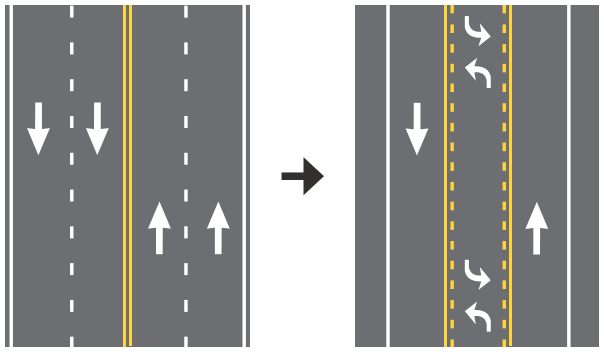
While the operational recommendations described above would provide some benefits, they do not address the most significant safety issue, i.e. that a four-lane section combined with numerous un-signalized crossing locations creates a situation where pedestrians desiring to cross Atlantic are often exposed to multiple lanes of fast-moving traffic. Four-lane sections have also been shown to increase crashes for motorists because they encourage higher speeds and weaving. Under the current four-lane configuration, additional protected crossings would be needed along the length of the corridor to significantly improve the pedestrian crossing situation.

An alternative approach is to redesign the Atlantic Avenue corridor so that it functions better for all users. Converting Atlantic Avenue from a four-lane to a three-lane section (commonly referred to as a road diet) is recommended as a comprehensive solution to address bicycle and pedestrian needs while also improving vehicular safety and maintaining parking in both directions. Road diets have been shown to provide benefits for all roadway users – bicyclists, pedestrians, and motorists. In addition to providing space for bicycle lanes, they significantly improve pedestrian safety by allowing pedestrians to cross one lane of traffic at a time, thus eliminating the multi-lane threat condition. A road diet would also help to manage speeds on Atlantic Avenue by preventing vehicles from weaving and driving faster than the rest of the traffic flow. Finally, road diets have been shown to reduce vehicular crash rates by decreasing the number of conflict points (more information on road diets is provided in Appendix D).

Available traffic data indicates that Atlantic Avenue through the study area falls within acceptable traffic volume limits for road diet conversions. Implementation of a road diet would involve upgrade or replacement of the existing traffic signals, and may provide opportunities to reduce or consolidate the number of traffic signals – particularly those whose main purpose is to facilitate pedestrian crossings. Further study would be needed to determine the specific geometry and traffic design of a road diet on Atlantic Avenue, but the road diet would function best as a regional facility through Ventnor and Margate that is consistent with the section in Longport and could be extended into Atlantic City.

Two versions of the three-lane section concept were developed: (A) a typical road diet with bicycle lanes in both directions and (B) a variation with a two-way bikeway on the beach side.

4-Lane to 3-Lane Conversion (Road Diet)



(A) Three-Lane Section w/ Directional Bike Lanes

Figure 19 presents a concept plan and cross-section for a road diet with directional bike lanes on Atlantic Avenue. In this scenario, the road would be restriped to provide one travel lane and a buffered bicycle lane in each direction with a two-way center turn lane. Enough width is available to buffer the bike lane from both the parking lane and the travel lane. The center turn lane can be used as a pedestrian refuge at intersections with one-way/southbound streets, where there are no turns from Atlantic onto the side street.

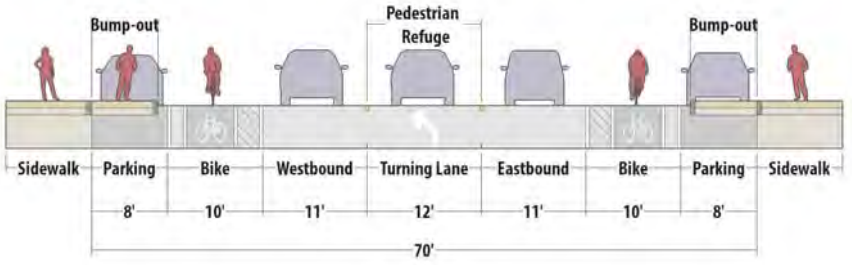
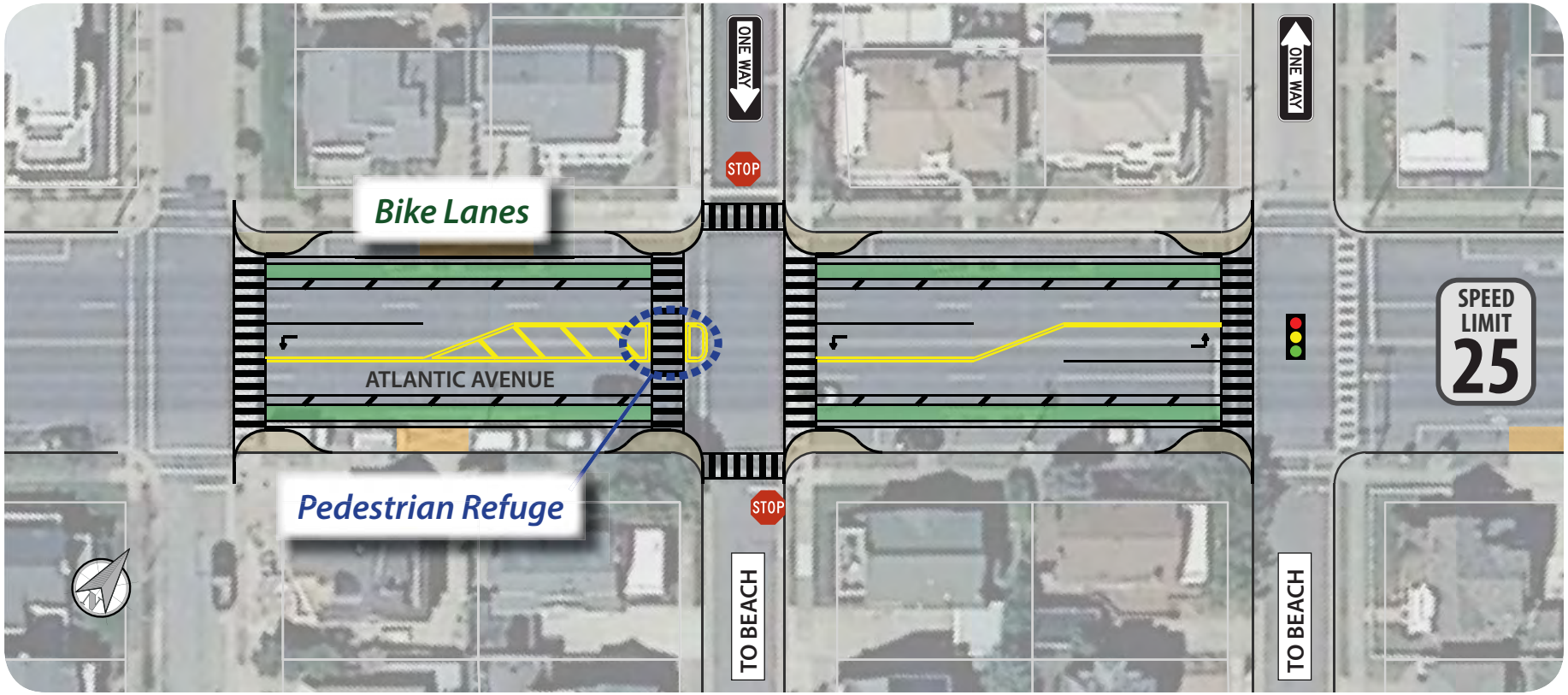


Figure 19: Atlantic Avenue - Option A



(B) Three-Lane Section w/ Separated Bikeway

Figure 20 shows a variation of the road diet that consolidates the directional bicycle lanes into a two-way, parking protected bikeway on the beach side of Atlantic Avenue. The bikeway would be physically separated from traffic and designed to maintain both on-street parking and access to local driveways. This variation would provide a low-stress facility for bicycling along Atlantic Avenue, and would also benefit pedestrians by adding an additional refuge area between the bikeway and the travel lanes. Bicycle signals could be used at intersections to minimize potential conflicts between turning vehicles and bikeway users.

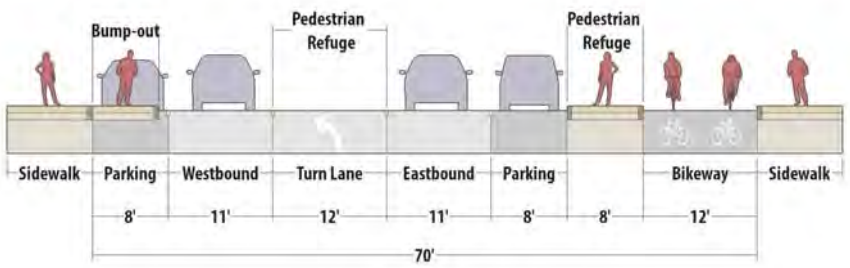
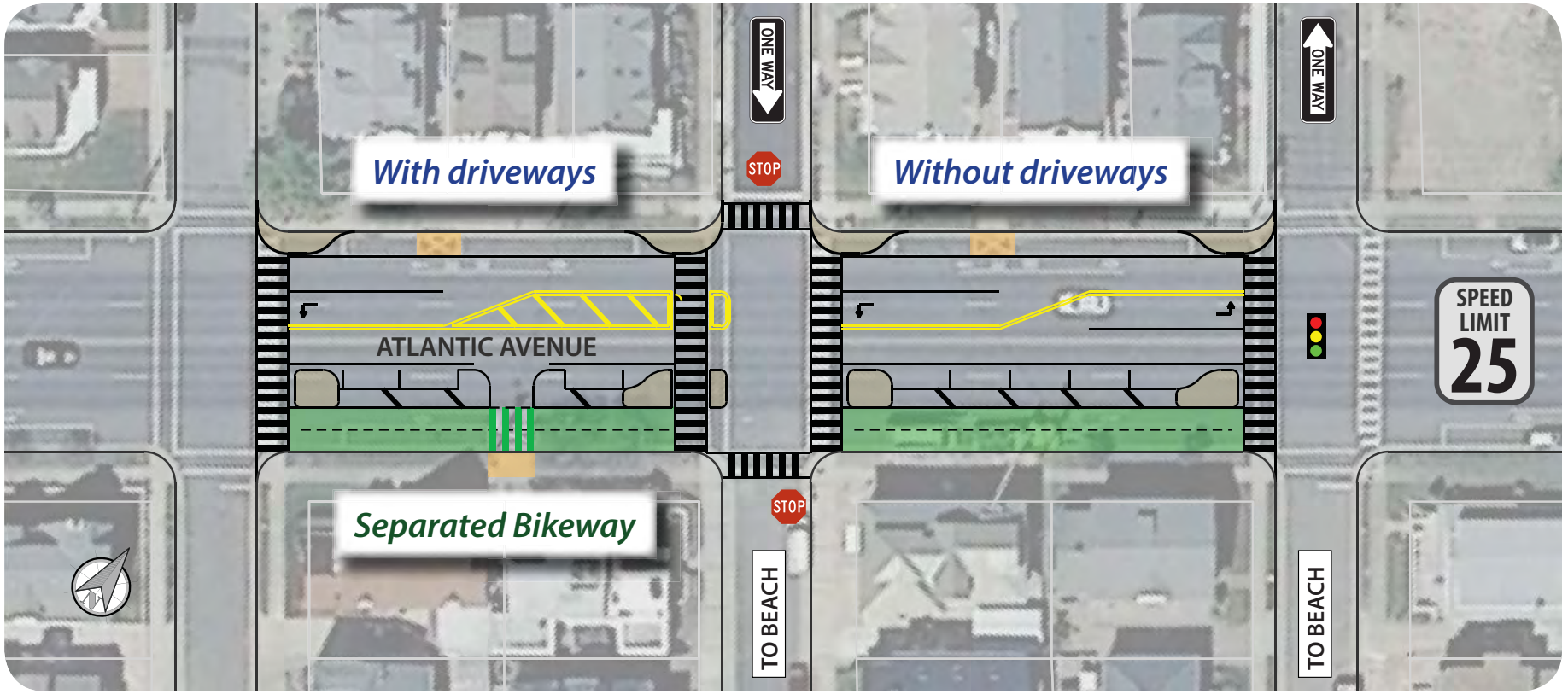


Figure 20: Atlantic Avenue - Option B



Bicyclists on Ventnor Ave

Ventnor Ave between N. Wilson and Jerome

Ventnor Avenue/Dorset Avenue (CR 629)

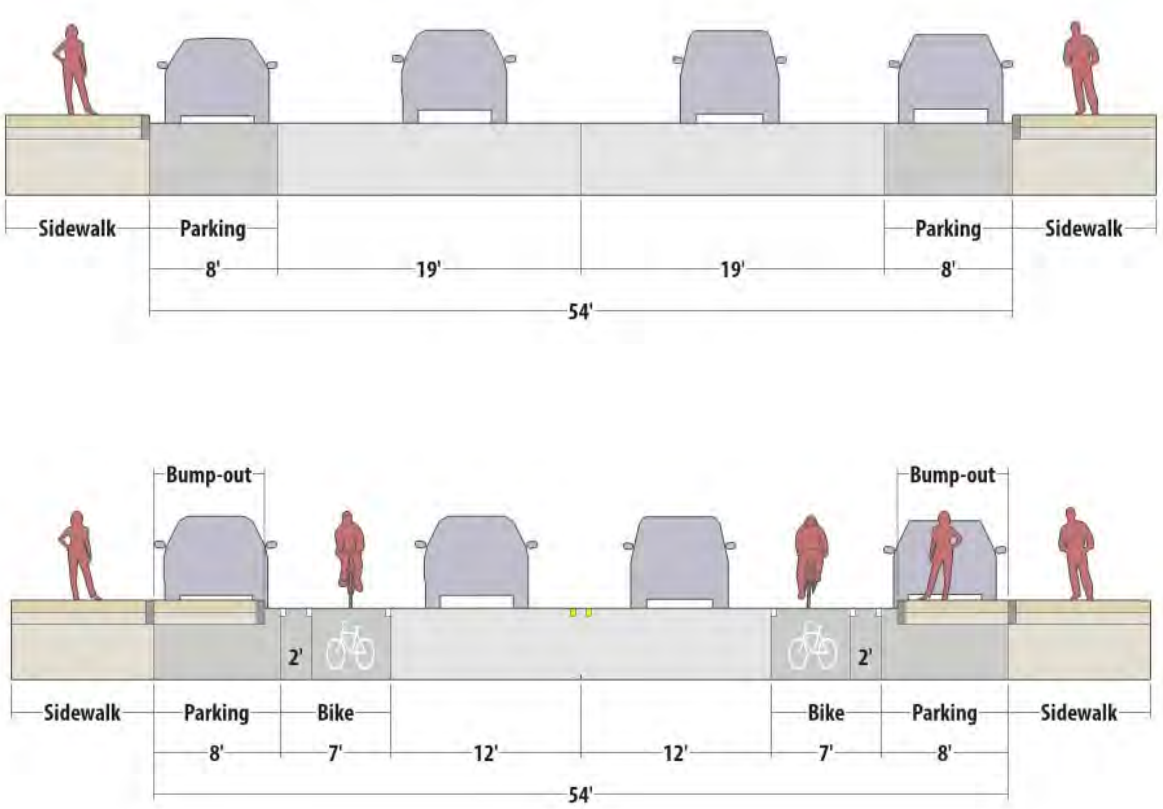
Recommendations for CR 629 are focused on improving bicycle travel along these corridors and addressing pedestrian issues in specific problem areas. Complementary corridor-wide pedestrian recommendations for Ventnor Avenue and Dorset Avenues are discussed with the Pedestrian Improvement Plan earlier in this chapter.

VENTNOR AVENUE BICYCLE LANES

Ventnor Avenue's wide travel lanes present an opportunity to better accommodate the many bicyclists who ride on this active commercial street. Bike lanes would better organize the roadway space by indicating the best place for bicyclists to ride, while at the same time discouraging cars from speeding and passing within the lane. Figure 21 shows the recommended section for Ventnor Avenue, which features 12' wide travel lanes with a 7' wide buffered bike lane in each direction. A 2' striped buffer area is recommended between the bike lanes and on-street parking to encourage bicyclists to ride outside of the door zone.

The section of Ventnor Avenue between N. Wilson Avenue and Jerome Avenue currently has a center turn lane in addition to the two travel lanes. Design of the bicycle lanes through this section would need to balance the need for the center turn lane with the need for on-street parking in both directions. Bicyclists would also have the option to ride along the low-volume, low-speed frontage roads that run parallel to the main travel lanes.

Figure 21: Recommended Cross-Section for Ventnor Avenue



EXISTING SECTION

RECOMMENDED SECTION
Buffered Bike Lanes +
Curb Extensions

VENTNOR AVENUE AT DORSET AVENUE

The section of Ventnor Avenue between Sacramento Avenue and Dorset Avenue has the highest concentration of bicycle/pedestrian crashes in the study area, with many involving pedestrian crossings at un-signalized intersections. Figure 22 shows a concept plan for this area that addresses bicycle and pedestrian needs by:

- Adding high-visibility crosswalk markings at three un-signalized intersections (N. Cornwall, N. Derby, and N. Dudley) with a pedestrian refuge island at N. Derby Avenue
- Removing the second (curbside) through-lane in the eastbound direction. Removal of this lane would allow space for a bicycle lane in each direction and on-street parking in one direction, and would encourage lower vehicle speeds. Preliminary traffic analysis indicates that the second through-lane is not needed to maintain adequate traffic flow.

DORSET AVENUE BRIDGE

The section of Dorset Avenue between Ventnor Avenue and Monmouth Avenue is a high-crash area that was identified as a high-priority problem area by local stakeholders. Figure 23 shows a concept plan for this area, which incorporates the following treatments:

- Improving sight lines at the Edgewater Avenue intersection by adding curb extensions and re-aligning the existing crosswalk
- Installing a bikeable surface over the open metal grate bridge surface (minimum 6' width in each direction). Surface options include steel plates or concrete infill; both treatments have been utilized to retrofit similar bridge surfaces in other communities.
- Adding buffered bicycle lanes to Dorset Avenue through Ventnor Heights. The bike lanes would extend south to Winchester Avenue, where they would transition to Shared Lane Markings for one block before connecting with the Ventnor Avenue bike lanes.
- Painting or texturizing the Dorset/Edgewater/Derby intersection to calm traffic and create a gateway into Ventnor Heights

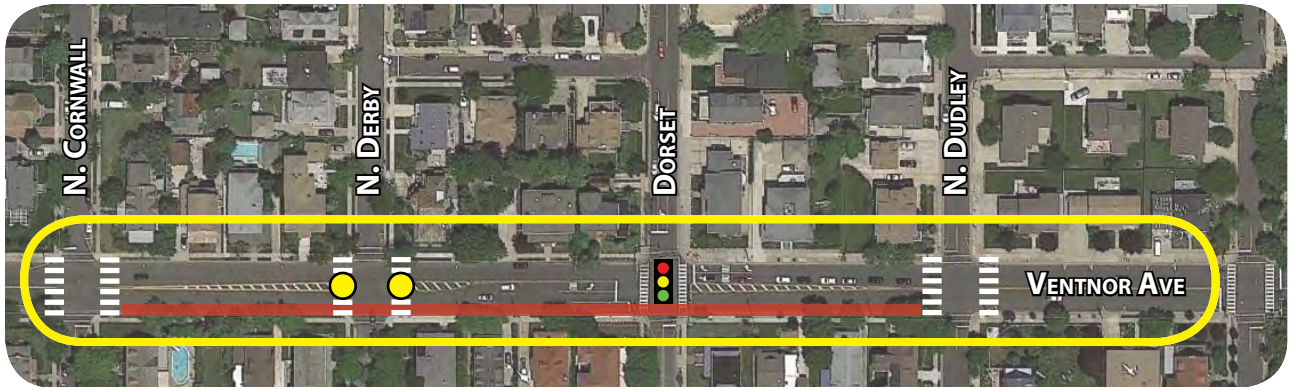


Figure 22: Ventnor Avenue Crash Corridor

Crossing at N. Derby Ave

Figure 23: Dorset Avenue Bridge Concept Plan

EXISTING CONDITIONS

EXAMPLE OF STEEL OVERLAY

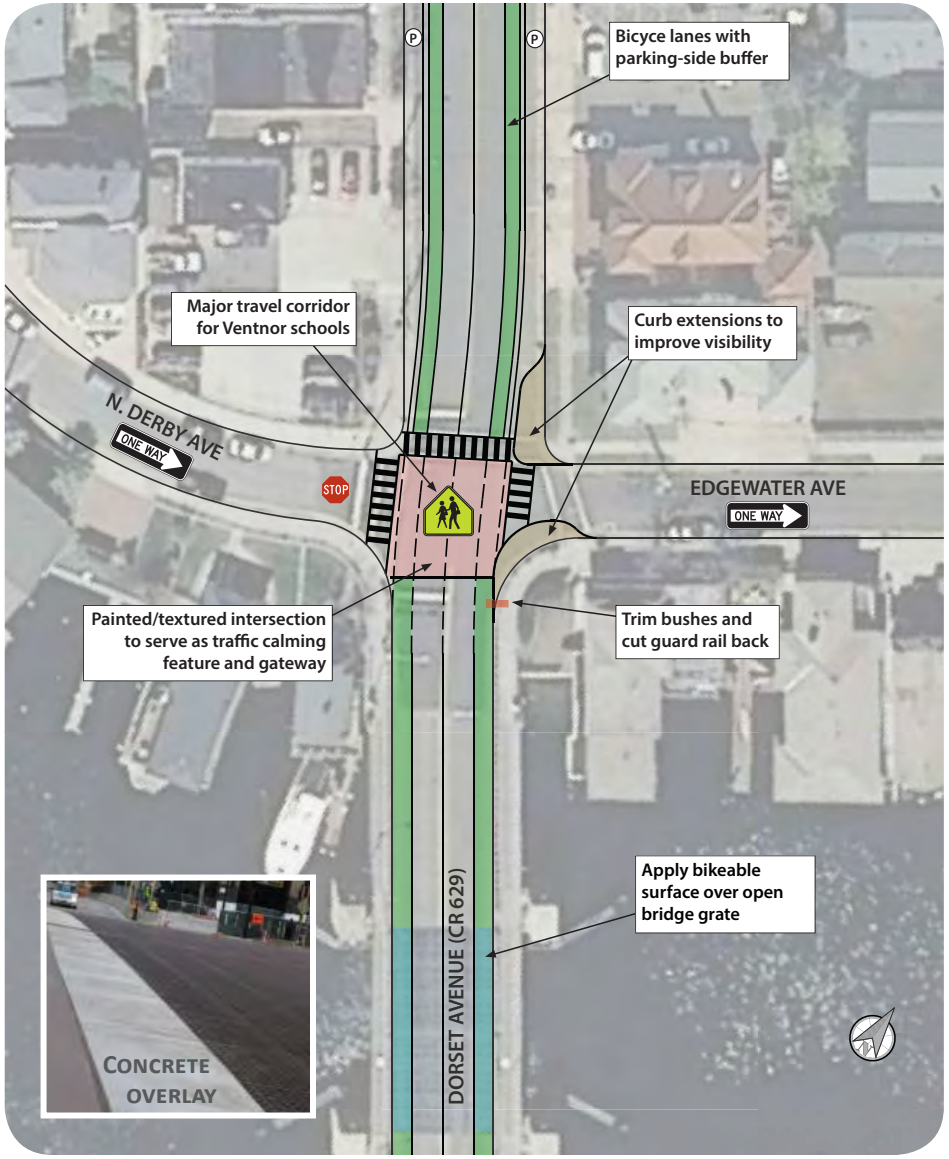


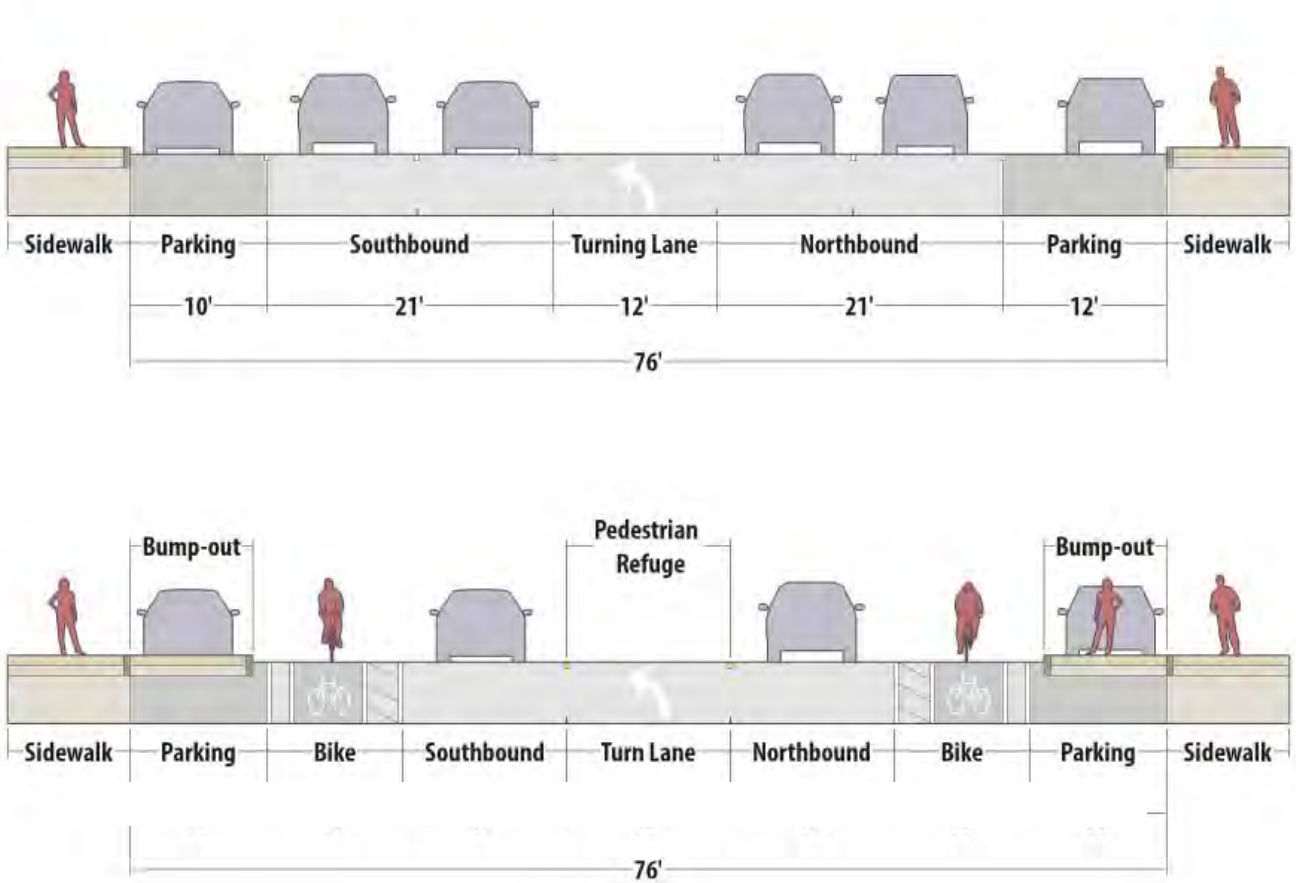
Figure 24: Recommended Additional Crossing Locations

Jerome Avenue (CR 563)

A five-lane to three-lane road diet is recommended to make it safer for pedestrians to cross Jerome Avenue and accommodate bicycle travel, while maintaining parking on both sides of the road. The road diet cross-section shown in Figure 25 would replace the outermost travel lane in each direction with a buffered bicycle lane. In addition to providing dedicated space for bicycle travel, a road diet would improve pedestrian conditions by eliminating the multi-lane threat at un-signalized crossing locations and better managing vehicle speeds (see Appendix D for more information about road diets).

New marked crossings are recommended at the un-signalized intersection with Fremont Avenue and near Wellington Avenue to provide better pedestrian access between major activity generators (see Figure 24). Each of these crossings should have a pedestrian refuge island using the center turn lane. A road diet conversion would easily accommodate these new crossings; however, if the road were to remain as a five-lane section, a higher-level treatment (Pedestrian Hybrid Beacon or traffic signal) should be provided at each crossing location due to high vehicle speeds and the multiple lane threat. Curb extensions are recommended at the five signalized intersections along Jerome Avenue to shorten pedestrian crossing distances and improve visibility.

Figure 25: Recommended Cross-Section for Jerome Avenue



EXISTING SECTION

RECOMMENDED SECTION

Buffered Bike Lanes + Pedestrian Refuge + Curb Extensions

4. SAFE ROUTES TO SCHOOL

Concepts were developed to improve walking and bicycling access to local schools by addressing the problem areas identified in each city's School Travel Plan. Figure 27 on the next page provides an overview of the recommended improvements.

Margate Intersection Improvements

Pedestrian improvements were developed for the intersections of Fulton & North Huntington, Amherst & North Huntington, and Amherst & Gladstone (see Figures 26,28,29). These three intersections were identified as "problematic intersections" in the Margate School Travel Plan due to their confusing geometry, excess pavement, and lack of pedestrian elements. The improvements are common across the three intersections and include:

- Median islands to calm traffic, improve visibility, and shorten crossing distances
- High-visibility crosswalks across all intersecting legs
- Additional stop control for both intersecting and through streets

In addition to creating a safer and more predictable environment for children walking to the William H. Ross Elementary School and Eugene A. Tighe Middle School, these improvements would facilitate better crossing guard safety and management at the two intersections where crossing guards are located (Amherst & North Huntington and Amherst & Gladstone).

Figure 26: Fulton & N. Huntington Concept Plan

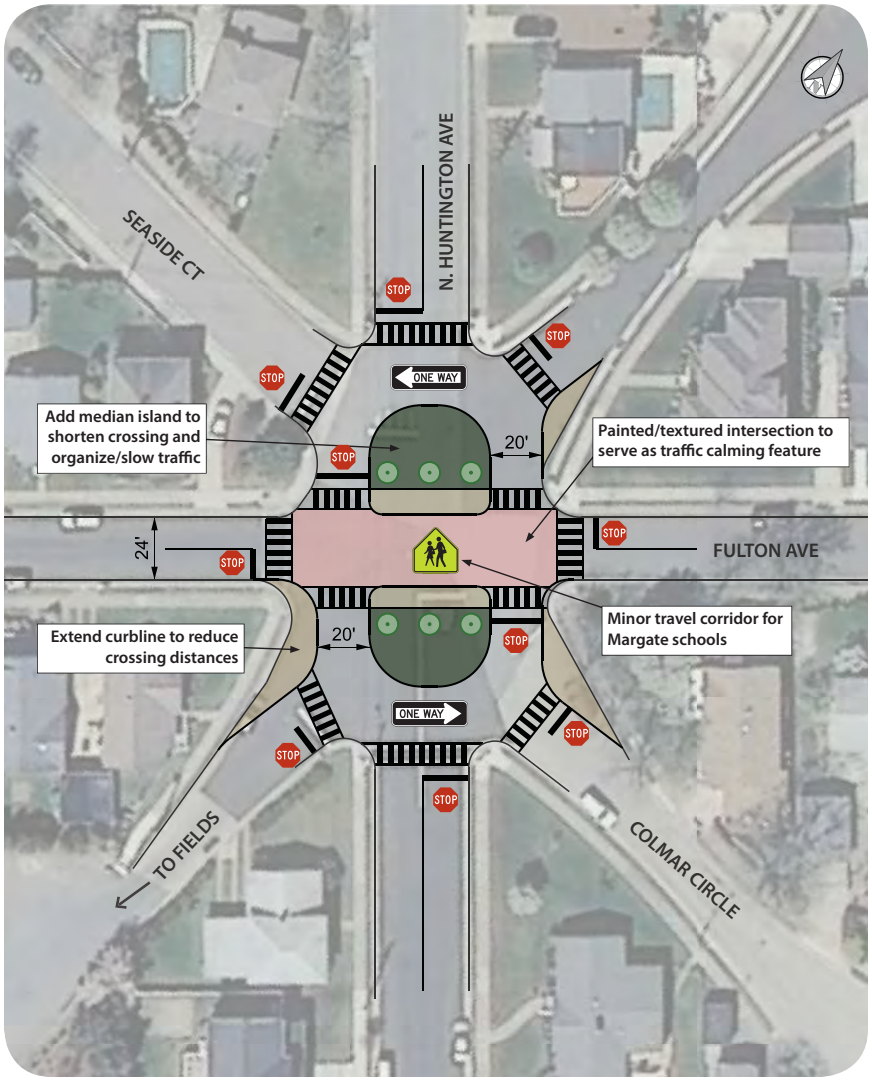


Figure 27: Safe Route to School Overview Plan

NOTE: Further study is recommended to investigate the feasibility of bicycle lanes on Monmouth and Winchester Avenues

Figure 28: Amherst & N. Huntington Concept Plan

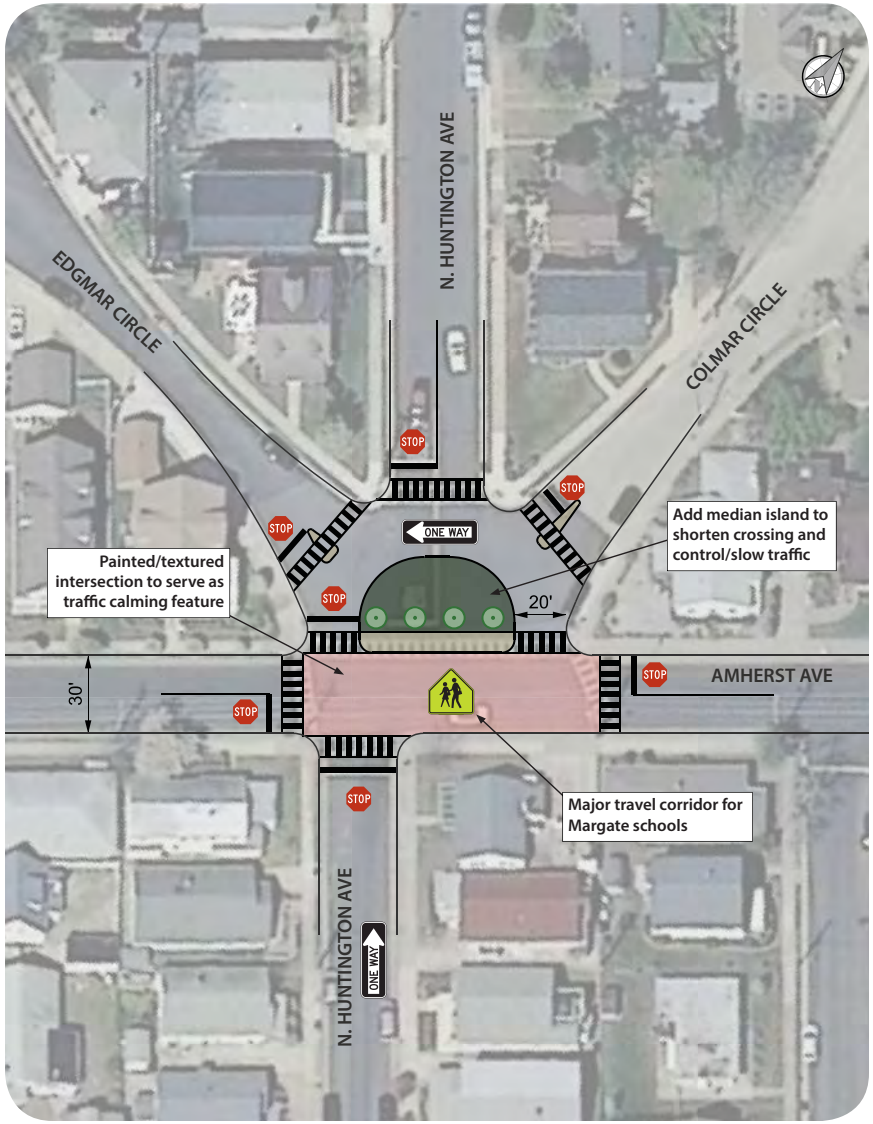
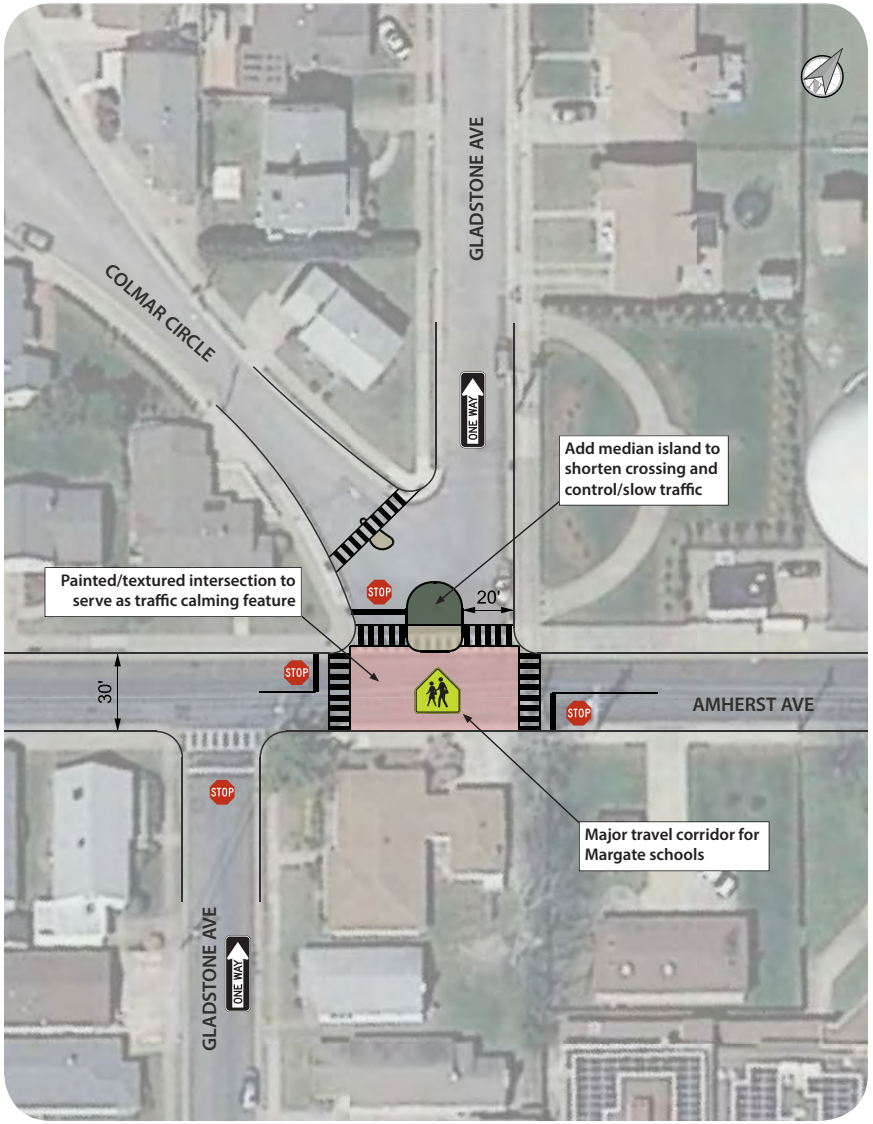


Figure 29: Amherst & Gladstone Concept Plan



Ventnor Intersection Improvements

VENTNOR GARDENS PLAZA & WYOMING AVENUE

Pedestrian improvements were developed for the intersection of Ventnor Gardens Plaza and Wyoming Avenue (see Figure 30), which is part of the primary walking route to the Ventnor Educational Community Complex (VECC) but was identified as an area of concern in the *Ventnor School Travel Plan*. The improvements include curb modifications/extensions at each corner to calm traffic, improve visibility, and shorten crossing distances along with high-visibility crosswalks and stop control at each of the four legs. These improvements would create a safer and more predictable environment for children walking to VECC and facilitate better crossing guard safety and management at this intersection.

LAFAYETTE AVENUE

A combination of bicycle and pedestrian improvements were developed for Lafayette Avenue directly in front of the VECC. The street is currently very wide (60') and the space is not well defined, which leads to long crossings/vehicular speeding and makes it more difficult for crossing guards to manage the space. Figure 31 shows a concept plan for Lafayette Avenue. Bicycle lanes along Lafayette Avenue would provide dedicated space for kids biking to school, and along with a striped center turn lane, better define the roadway space. Curb extensions are proposed at the three crossing locations along Lafayette Avenue- Balfour Avenue, Essex Court, and Fulton Avenue – to shorten crossings, calm traffic, and improve visibility. Pedestrian refuge islands would also be included at each crossing location.

Monmouth & Winchester Avenues

Shared lane markings are recommended as an immediate strategy for Monmouth and Winchester Avenues to improve conditions for children who are comfortable bicycling in the road, as well as others desiring to bicycle on these routes. This plan also recommends investigating the feasibility of bicycle lanes on Monmouth/Winchester as a longer term strategy to improve bike access to schools within the study area. Bike lanes could be achieved by replacing one of the parking lanes with a bike lane, which would be located along the curb and separated from the travel lane with a 2-3' wide buffer area. The bike lanes would function as a one-way pair, with an EB bike lane on Monmouth and a WB bike lane on Winchester (see Figure 27). This configuration would continue to provide space for vehicular pickup/drop-off along Monmouth Avenue in front of the Ross E.S.

Bike lanes on Monmouth/Winchester were supported by some members of the steering committee and are recommended in the *Margate School Travel Plan*. Further study is recommended to evaluate existing parking patterns along these streets. This data would help inform decision-making as to whether bike lanes are appropriate along all or portions of Monmouth/Winchester.

Increasing the number of multi-way stop-controlled intersections along Monmouth and Winchester Avenues was discussed as a strategy to provide safer pedestrian crossings and discourage cut-through traffic on these streets. The majority of intersections along Monmouth/Winchester lack crosswalks and are stop-controlled for only the minor streets, which can lead to driver and pedestrian confusion over who has the right-of-way and encourages cut-through traffic. Further study is recommended to determine which intersections could be converted to multi-way stops with marked crosswalks.

Figure 30: Wyoming & Ventnor Gardens Concept Plan

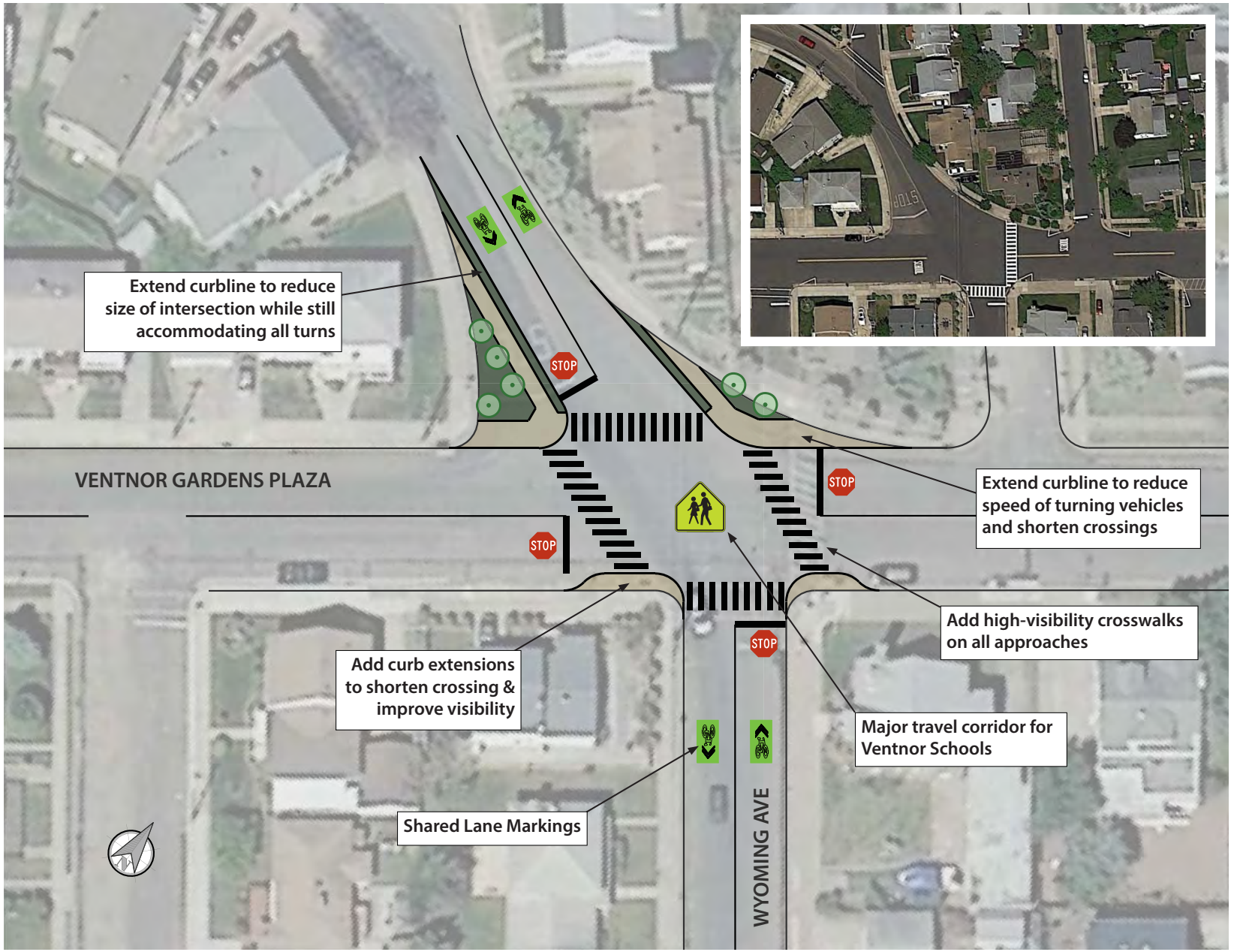
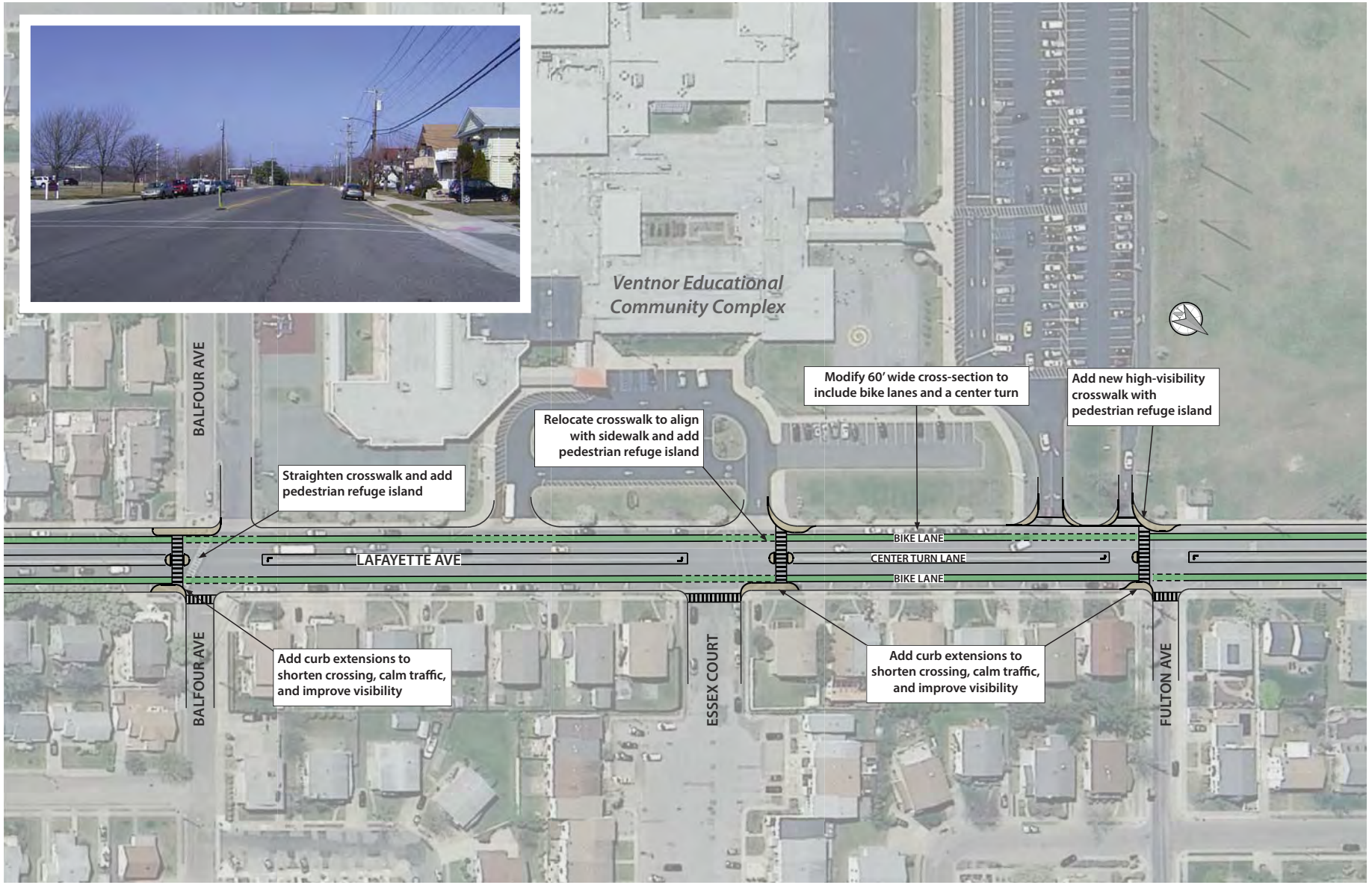


Figure 31: Lafayette Avenue Concept Plan



5. POLICY & PROGRAM RECOMMENDATIONS

The bicycle and pedestrian recommendations outlined in this plan are designed to provide safe and convenient access to activity generators for non-motorized forms of transportation. While "engineering" solutions can go a long way to meet this need, a successful bicycle and pedestrian program also incorporates policy and program-related recommendations. Program recommendations can improve conditions for bicyclists and pedestrians through education, encouragement, and enforcement actions, while policy actions that benefit bicycle and pedestrian travel can have long-lasting effects with minimal or even no financial cost.

Education

Crash data analysis shows that engineering improvements alone will not reduce the incidence of pedestrian injuries and fatalities. Sustained education, coupled with encouragement and enforcement, has proven over time to be highly effective in changing behaviors and improving safety.

The goal of an effective education program is to increase public awareness of non-motorized travel modes, and to teach safe behavior to walkers, cyclists, and motorists. Pedestrians, cyclists, and motorists all need to be taught how to co-exist safely, and that each is a legitimate user of the road. Successful education strategies can help motivate a change in specific behavior, and teach safety skills that can reduce the risk of injury. These programs also help raise awareness of pedestrian and bicycle issues.

Ventnor and Margate should work with Longport and Atlantic City to develop a regional education campaign for Absecon Island. A good example is the Street Smart NJ campaign, which is a public education, awareness, and behavioral change pedestrian safety campaign created and coordinated by the North Jersey Transportation Planning Authority (NJTPA). This program has proved successful at changing travelers' behavior so that they are making smarter, safer decisions on the road. Education is geared towards all users- motorists, bicyclists, and pedestrians.

STREET SMART, NJ

The Street Smart NJ campaign was first piloted in 2013 in five New Jersey communities – Hackettstown, Jersey City, Long Beach Island, Newark, and Woodbridge – and demonstrated the value of community-based efforts to change pedestrian and motorist behavior to improve safety. The program was expanded in 2016 to include the NJ Shore communities of Asbury Park, Bay Head, Bradley Beach, Long Branch, Manasquan, and Point Pleasant. The campaign uses radio, outdoor, and transit advertising – along with grassroots public awareness efforts and law enforcement – to address pedestrian safety. Communities and organizations can use the strategies and materials that are available on NJTPA's website to create their own campaigns that build on the successes realized in the initial pilot communities.

EXAMPLE MATERIAL FROM STREET SMART NJ CAMPAIGN

Encouragement

Many strategies can be used to encourage people to walk or bike instead of driving, especially for short trips. Bicycle and pedestrian education programs for children help to encourage walking and cycling at an early age. Building on previous efforts, Ventnor and Margate should continue partnering with the local transportation management association (CCCTMA) to develop and maintain bicycle/pedestrian programs at the local schools.

Outreach to the adult population is equally important. The health benefits of active transportation can be a powerful encouragement tool when advertised and reinforced regularly. To reach local residents, Ventnor and Margate should publish materials explaining the health benefits of biking and walking on municipal and partner websites (Green Team, School District, Police Department, etc.).

Walk to School Day
(source: redbankgreen.com)

BICYCLE MAPS AND BROCHURES

Maps and/or brochures showing the bicycle network can help encourage cyclists to use designated routes – while also teaching motorists to expect cyclists on these routes. The beach communities should work together to develop materials that identify existing bicycle and pedestrian routes, both locally and regionally. By highlighting preferred routes for walking and biking, these maps can be useful to both residents and visitors. Maps can also contain information about the benefits of non-motorized transportation, walking and biking safety tips, relevant traffic laws, bicycle parking locations, and information about local biking or walking groups.

Enforcement

Enforcement is a key component of a successful bicycle and pedestrian program. After the engineering recommendations are implemented, and in conjunction with education and encouragement efforts, new roadway conditions require enforcement for patterns of behavior to change. A common problem with enforcement actions is that one side is labeled the enemy and the other a victim, creating animosity among users. An effective program focuses on awareness and education, and enforces legal behavior among all users.

Enforcement alone will not always yield behavioral changes. Quite often, there is a physical condition that influences behavior. For example, a straight road with multiple and/or wide lanes often results in high speeds, regardless of the posted speed (Atlantic Avenue and Jerome Avenue are good examples). In these situations, ticketing will not necessarily reduce speeds, and a change to the physical roadway is often required.

Enforcement should always be paired with education and encouragement to improve the bicycle and pedestrian environment. Without encouraging and increasing bicycle and pedestrian activity, motorists will not expect them to be in the roadway, and will be less prepared for their presence. Similarly, engineering efforts will be wasted without users of the bicycle and pedestrian improvements.

"STOP AND STAY STOPPED" LAW

New Jersey's "Stop and Stay Stopped" law (enacted April 1, 2010) was evaluated in context of this study. While opinions on the law have been mixed, representatives from the New Jersey Division of Highway Traffic Safety have indicated that pedestrian crashes in most NJ Shore towns have decreased since the law's passage. For example, in Ocean City there was a 46 percent drop in the five years after the law (36) compared with the five years prior to the law (67). In Ventnor and Margate combined, there were 95 bicycle/pedestrian crashes during the 3 full years preceding the law's passage, as compared to 64 bicycle/pedestrian crashes in the 3 full years following passage (33% drop).

Modifications to Municipal Codes

The portions of Ventnor and Margate's municipal codes that cover walking, biking, and street design were reviewed to understand how these regulations influence bicycle and pedestrian conditions. Several code modifications are recommended to improve conditions for bicycle and pedestrian travel, both now and with future land development decisions. These include eliminating bicycle registration requirements, regulating bike rack locations on sidewalks, and providing adequate room for street trees. A detailed description of these recommendations, listed by code section, are included in Appendix E.

Ventnor and Margate should develop bike parking ordinances to further support bicycling trips throughout the city. Bike parking ordinances typically require that bicycle parking is provided with new development and redevelopment. The number of required bike parking spaces is usually based on development characteristics such as square footage, number of residential units, number of employees, number of auto spaces, and/or minimum spaces per use (i.e. restaurants). Additionally, the City of Ventnor should develop and adopt a Complete Streets policy to integrate implementation of bicycle and pedestrian projects into local planning and design decisions.

Example Bicycle Parking Regulation:

"Bicycle parking within the public right-of-way shall be located so as not to block the pedestrian path on a sidewalk or within a site. A minimum of 5' of unobstructed passage is required on public sidewalks. All bike racks shall be located at least 24 inches in all directions from a wall, door, landscaping, or other obstruction."

Bike Share System

Bike share is an urban transportation concept based on collective use of a distributed supply of bicycles. The bike share concept was pioneered (in its current form) in Europe and is now being implemented, designed, and/or studied in many North American cities. Through this system, bicycles are made available for shared use to individuals on a short term basis. A major benefit of bike share is that people are allowed to borrow a bike from point "A" and return it at point "B". Given the success in other Northeastern cities, it is recommended that the beach communities – Longport, Margate, Ventnor, and Atlantic City – study the feasibility of implementing a regional bike share system for Absecon Island. Many of the activity generators shown in the Bicycle Parking Plan (Figure 14) would be candidate locations for bike share stations.

Feasibility Study Considerations:

Physical Characteristics:
- Service Area
- Station Density/Siting

Business Model
- Jurisdiction Owned/Managed
- Non-Profit Business
- For Profit Business

Other Considerations
- Year-round vs. Seasonal
- Program Marketing

Indego Bike Share in Philadelphia

Capital Bike Share in Washington, DC

Chapter 5: Implementing the Plan

This chapter describes how the recommendations for establishing a network of safe pedestrian and bicycle facilities in Ventnor and Margate can be achieved. The range of actions necessary to implement this plan varies based on the recommended facility type and character of the existing street (or corridor). Improvements may be as simple as adding pavement markings or signage, or may require more complex actions such as reconfiguring street cross-sections or constructing new sidewalks and shared use paths. Some of the recommendations will require additional planning and engineering efforts and may take years to implement, while others could be achieved in a shorter timeframe. The plan also contains policy and program recommendations, some of which can be implemented at little to no cost.

Next Steps

The concepts and recommendations presented in this plan were developed in accordance with current design guidance, but are not fully engineered. Implementation of many of the recommendations will require engineering studies to refine design elements related to traffic warrants, right of way, drainage design, utilities, and other considerations. This study did not investigate whether existing curb ramps or other pedestrian features are compliant with current ADA standards.

Recommendations from this study will also need to be advanced in accordance with state and federal regulations that govern environmentally-sensitive areas, which include coastal zones, wetlands, woodlands, and preserved open space. The avoidance of regulated wetlands will be a consideration during the implementation of recommended shared use path projects. Projects adding new paved areas will also need to meet NJDEP Stormwater Management (SWM) Rules for groundwater recharge and runoff quantity. The use of pervious paving – whether asphalt, concrete, or gravel – can help to mitigate potential environmental impacts related to stormwater runoff.

Detailed implementation tables were developed for the Pedestrian Improvement Plan (Figure 32) and the Bicycle Network Plan (Figure 33). These tables include a brief description, order-of-magnitude cost, timeframe, and jurisdiction for each recommendation. The tables also provide an estimate of the complexity of each project to aid in the decision-making process. To avoid duplicative or overlapping actions, the recommendations from the Focus Area, Safe Routes to School, and Policy & Program components are incorporated into the Pedestrian and Bicycle tables.

Project Phasing

Since the projects and programs presented in this plan would be developed over many years, phasing of the recommendations is an important consideration. Recommended timeframes for major plan elements are included in each implementation matrix. Several of the project and program recommendations in this plan could be implemented soon after it is adopted. These immediate action items will improve pedestrian and bicycle conditions in specific areas, creating early successes. These items will also build momentum for implementing the other recommendations.

Figure 32: Implementation Matrix for Pedestrian Improvement Plan

LEGEND:	COMPLEXITY	COST	TIMEFRAME
	(H) - High	**$** - 0 to $10K	**Immediate (I)** - Within a year
	(M) - Medium	**$$** - $10K to $100K	**Short (S)** - 1 to 3 years
	(L) - Low	**$$$** - $100K +	**Medium (M)** - 3 to 5 years
			Long (L) - 5 years +

Category	*Location*	*Description*	*Complexity*	*Cost*	*Timeframe*	*Jurisdiction*
Corridor-Wide Pedestrian Improvements	Atlantic Avenue	Entire length	M	$$$	M	V & M
	Ventnor Avenue (CR 629)	Within business districts	M	$$$	M	County / V & M
	Dorset Avenue (CR 629)	Between Ventnor Ave and Balfour Ave	L	$$	M	County / Ventnor
	Amherst Avenue	Between 36th Ave and Washington Ave	L	$$	S	Margate
	Washington Avenue (in Margate)	Entire length	M	$$	M	Margate
Pedestrian Crossing Improvements (GEOMETRIC IMPROVEMENTS AT EXISTING CROSSINGS)	N. Huntington Avenue at Lagoon Drive	Geometric improvements / stop control	M	$$	M	Margate
	N. Huntington Avenue at Marshall Avenue	Geometric improvements / stop control	M	$$	M	Margate
	N. Huntington Avenue at Fulton Avenue	Refer to discussion under SRTS	M	$$$	S	Margate
	N. Huntington Avenue at Amherst Avenue	Refer to discussion under SRTS	M	$$	S	Margate
	N. Gladstone Avenue at Fulton Avenue	Geometric improvements / stop control	M	$$	M	Margate
	N. Gladstone Avenue at Amherst Avenue	Refer to discussion under SRTS	M	$$	S	Margate
	Lafayette Avenue at Essex Court	Geometric improvements	L	$$	S	Ventnor
	Lafayette Avenue at Fulton Avenue	Geometric improvements	L	$$	S	Ventnor
	Wyoming Avenue at Calvert Gardens Plaza	Geometric improvements / stop control	M	$$	M	Ventnor
	Dorset Avenue (CR 629) at Edgewater Avenue	Refer to discussion under Focus Areas	L	$$	S	County
Pedestrian Crossing Improvements (NEW UN-SIGNALIZED CROSSINGS)	Jerome Avenue (CR 563) at Wellington Avenue	Refer to discussion under Focus Areas	M	$$	S	County
	Jerome Avenue (CR 563) at Fremont Avenue	Refer to discussion under Focus Areas	M	$$	S	County
	Ventnor Avenue (CR 629) at N. Cornwall Avenue	Marked crosswalk	L	$	I	County
	Ventnor Avenue (CR 629) at N. Derby Avenue	Marked crosswalk with pedestrian island	M	$$	S	County
	Ventnor Avenue (CR 629) at N. Dudley Avenue	Marked crosswalk	L	$	I	County
	Lafayette Avenue at Fulton Avenue	Marked crosswalk with pedestrian island	L	$$	I	Ventnor
	Wellington Avenue (CR 629) at Suffolk Avenue	Marked crosswalk with pedestrian island	L	$$	I	County
Pedestrian Crossing Improvements (NEW SIGNALIZED CROSSINGS)	Atlantic Avenue at Washington Avenue	Candidate Traffic Signal	M	$$	S	Ventnor
	Ventnor Avenue (CR 629) at Madison Avenue	Candidate Traffic Signal	M	$$	S	County
Sidewalk Improvements	Wellington Avenue (CR 629)	Btwn Littlerock and Ventnor Shopping Plaza	L	$$	S	Ventnor
	Ventnor Avenue (CR 629)	Btwn N. Wilson Ave and N. Mansfield Ave	M	$$	S	Margate
Other Pedestrian-Related Improvements	Atlantic Ave - Operational Recommendations	Refer to discussion under Focus Areas	Low	$-$$	I	V & M
	Atlantic Ave - Conversion to 3-Lane Section	Refer to discussion under Focus Areas	High	$$$	M	V & M
	Jerome Ave - Conversion to 3-Lane Section	Refer to discussion under Focus Areas	High	$$$	M	County
	Decatur Ave - Beach Access Street	Refer to discussion under Focus Areas	Medium	$$$	L	Margate
	Monmouth/Winchester - Additional Stop Control	Refer to discussion under SRTS	Medium	$$	S	V & M

Figure 33: Implementation Matrix for Bicycle Network Plan

LEGEND:	COMPLEXITY	COST	TIMEFRAME
	(H) - High	**$** - 0 to $10K	**Immediate (I)** - Within a year
	(M) - Medium	**$$** - $10K to $100K	**Short (S)** - 1 to 3 years
	(L) - Low	**$$$** - $100K +	**Medium (M)** - 3 to 5 years
			Long (L) - 5 years +

Category	*Location*	*Description*	*Complexity*	*Cost*	*Timeframe*	*Jurisdiction*
Shared Lane Markings	Adams Avenue	Entire length	L	$	S	Margate
	Amherst Avenue	Between Washington Ave and Coolidge Ave	L	$	S	Margate
	Balfour Avenue	Entire length	L	$	S	Ventnor
	Clermont Avenue	Entire length	M	$$	S	Margate
	Delavan Avenue	Entire length	M	$$	S	Margate
	Dorset Avenue (CR 629)	Dorset Avenue Bridge to Atlantic Ave	L	$	S	County / Ventnor
	Jefferson Avenue	Entire length	L	$	S	Margate
	Lagoon / Bayshore / Swathmore	Connection with VECC	L	$$	S	V & M
	Monmouth Avenue	Entire length	M	$$	S	V & M
	Winchester Avenue	Entire length	M	$$	S	V & M
	Wyoming Avenue	Entire length	L	$	S	Ventnor
Bicycle Lanes	Atlantic Avenue	Entire length - see Focus Area discussion	M	$-$$	S	V & M
	Dorset Avenue (CR 629)	Between Dorset Avenue Bridge and the bay	L	$	S	County
	Jerome Avenue (CR 563)	Entire length - see Focus Area discussion	M	$$	M	County
	Monmouth Avenue	Longer-term option for further study	H	$$	M	V & M
	Ventnor Avenue (CR 629)	Entire length - see Focus Area discussion	M	$$	S	County
	Winchester Avenue	Longer-term option for further study	H	$$	M	V & M
	Wellington Avenue (CR 629)	Dorset Avenue to Atlantic City border	L	$	S	County
Shared Use Paths	Ventnor Boardwalk - Signage/Hours of Operation	See Focus Area discussion	L	$	I	Ventnor
	Ventnor Boardwalk - Widening	See Focus Area discussion	H	$$$	L	Ventnor
	Margate Beach Path	See Focus Area discussion	H	$$$	L	Margate
	Path near Tighe Middle School	New path between Fremont and Amherst	L	$	S	Margate
	Paths near VECC	New paths on public and/or utility ROW	M	$$	L	V & M
Other Bicycle-Related Recommendations	Bicycle & Pedestrian Safety Campaign	Campaign geared towards all roadway users	M	$$	I	V & M
	Bicycle Parking Facilities	Refer to Bicycle Parking Plan	L	$$$	I	V & M
	Bicycle Route/Destination Signage	Regional signage system	M	$$	M	V & M
	Bicycle Brochures/Maps	Education/encouragement materials	L	$	M	V & M
	Regional Bike Share System	Further study to determine feasibility	H	$$	S	V & M
	Complete Streets Policy	Develop and adopt a policy	L	NA	I	Ventnor
	Bicycle Parking Ordinances	New ordinances regulating bike parking	L	NA	I	V & M
	Elimination of Bicycle Licensing Requirement	Code modifications	L	NA	I	V & M

Project Funding

Figure 34 lists several federal and state programs that are commonly used to fund bicycle and pedestrian projects. The table provides a description of each program along with the program administrator, the annual funding available for each program (either state-wide or region-wide), and the amount of funding available for an individual allotment. Ventnor and Margate can use this plan to pursue funding through these programs. As an example, both cities were jointly awarded a $275,000 Congestion Mitigation and Air Quality (CMAQ) grant to install bicycle racks at beach access points and in public rights of way that are easily accessible to bicyclists. In addition, Atlantic County will be receiving $3,547,000 in CMAQ funds for the design and construction of pedestrian and traffic signal improvements along the CR 629 project corridor.

The South Jersey Transportation Planning Organization (SJTPO), in conjunction with NJDOT, has established a Local Safety Program (LSP) that provides funding to advance selected safety improvements on county and eligible local roadway facilities within its region. To address areas with safety problems, applicants are strongly encouraged to select locations from one of the Network Screening lists developed for each county by SJTPO. Refer to Figure 11 in Chapter 2 for a list of the high-ranking locations within the study area.

Additional sources of funding could include regional, county, local, or philanthropic organizations. Ventnor and Margate can also pursue implementation of plan recommendations for locally-owned streets through their planning and engineering policies and roadway resurfacing programs. Adoption of a Complete Streets policy by the City of Ventnor would help to integrate implementation of bicycle and pedestrian projects into local planning and design decisions while at the same time strengthening applications to grant programs such as TAP.

Figure 34: Potential Funding Sources

Bikeway Grant Program Funds projects that promote cycling as an alternative mode of transportation. Priority is given to the construction of dedicated bicycle paths.	Program Administrator Funding Source Annual Total Allotments	**NJDOT** **State** **$1.0 M Statewide (FY 2016)** **$190K - $360K (FY 2016)**
Municipal Aid Funds appropriated to municipalities based on a formula for transportation projects, including the construction of pedestrian and bicycle projects.	Program Administrator Funding Source Annual Total Allotments	**NJDOT** **State** **$78.75 M Statewide (FY 2016)** **$80K - $1M (FY 2016)**

Figure 34: Potential Funding Sources (continued)

Local Aid Infrastructure Funds (LAIF) Non-competitive discretionary funds to address emergency and regional transportation needs. Pedestrian and bicycle projects are eligible for funding.	Program Administrator Funding Source Annual Total Allotments	**NJDOT** **State** **$7.5 M Statewide (FY 2014)** **$30K - $400K (FY 2014)**
Safe Streets to Transit (SSTT) Program Provides funding to counties and municipalities to improve walking access to transit facilities and all nodes of public transportation.	Program Administrator Funding Source Annual Total Allotments	**NJDOT** **State** **$1.0M Statewide (FY 2016)** **$220K - $500K (FY 2016)**
Local Bridges, Future Needs Funds for the maintenance and rehabilitation of county jurisdiction bridges.	Program Administrator Funding Source Annual Total Allotments	**NJDOT** **State** **$25.0 M Statewide (FY 2015)** **$300K - $2M (FY 2015)**
Green Acres Program Grants and loans to fund land acquisition projects for preservation or recreation as well as the construction of off-road bikeways.	Program Administrator Funding Source Annual Total Allotments	**NJDEP** **State** **$93.4 M Statewide (FY 2015)** **$300,000 - $975,000 (FY 2013)**
Transportation Alternatives Program (TAP) Funds non-traditional surface transportation projects, including the design, and construction of on- and off-road bikeways.	Program Administrator Funding Source Annual Total Allotments	**NJDOT/SJTPO** **Federal** **Not Available** **Not Available**
Safe Routes to School (SRTS) Infrastructure Program Funds for infrastructure projects that facilitate walking and cycling within two miles of K-8 schools.	Program Administrator Funding Source Annual Total Allotments	**NJDOT** **Federal** **$625K SJTPO Region (FY 2014)** **$275K - $350K (FY 2014)**
Recreational Trails Program (RTP) Funds to improve access to open space and provide additional biking and hiking opportunities. A 20% match is required.	Program Administrator Funding Source Annual Total Allotments	**NJDEP** **Federal** **$755,054 (FY 2013)** **Up to $24,000**
Congestion Mitigation & Air Quality (CMAQ) Program Funds projects and programs that improve air quality and reduce traffic congestion, including bicycle and pedestrian facilities and programs that are not exclusively recreational	Program Administrator Funding Source Annual Total Allotments	**FHWA/FTA/SJTPO** **Federal** **$1.9M SJTPO Region (FY 2017)** **$50K min (FY 2017)**
Local Safety Program (HSIP Funding) Funds projects that contribute to a significant reduction in fatalities and serious injuries on all public roads.	Program Administrator Funding Source Annual Total Allotments	**FHWA/SJTPO** **Federal** **Not Available** **Not Available**

** Table only includes federal and state funding sources. Additional sources of funding could include local, county, or philanthropic organizations*

Appendix A - Study Resolutions of Support

MARGATE RESOLUTION

RESOLUTION
NO. 141 OF 2014

SUPPORT FOR NJDOT BICYCLE AND PEDESTRIAN SAFETY PLANNING ASSISTANCE

WHEREAS, the City of Ventnor recognizes a concern for the safe, orderly and efficient movement of vehicular traffic and pedestrians throughout the City; and

WHEREAS, the safety of pedestrians and bicyclist is of upmost importance and the City has and plans to continue to explore ways to provide for safe access throughout the community; and

WHEREAS, the New Jersey Bicycle and Pedestrian Master Plan has established a vision for the State of New Jersey as a place where people choose to walk or bicycle with confidence and a sense of security; and

WHEREAS, the New Jersey Department of Transportation provides assistance by assigning consultants with expertise on local bicycle and pedestrian planning to help communities conduct circulation studies focusing on key corridor or activity centers; and

WHEREAS, the City of Ventnor wishes to work with the City of Margate, Atlantic County and the State of New Jersey to provide safer access for pedestrians and bicyclist throughout the community; and

WHEREAS, the City of Ventnor understands that this is a partnership program and the City would commit staff and resources to assist in this effort as needed; and

WHEREAS, the City of Ventnor is interested in obtaining Local Pedestrian and Bicycle Planning Assistance.

NOW THEREFORE BE IT RESOLVED that the governing body of the City of Ventnor supports an application for Local Pedestrian and Bicycle Planning Assistance.

BE IF FURTHER RESOLVED that the City of Ventnor with the support of the State and County will make a good faith effort to implement the recommendation of this planning study.

I, **JANICE K. CALLAGHAN, City Clerk** of the **CITY OF VENTNOR CITY,** do hereby certify that the foregoing resolution was duly adopted at a regular meeting of the **Ventnor City Board of Commissioners** held this **20th** day of **November, 2014** and in witness whereof I have hereunder set my hand and official seal on this date written.

	Motion	Second	Yes	Nay	Abstain	Absent
Sarno		✓	✓			
Kelly			✓			
Bagnell	✓		✓			

JANICE K. CALLAGHAN, RMC
CITY CLERK

VENTNOR RESOLUTION

Resolution #211 of 2014

Support for Bicycle and Pedestrian Safety Planning Assistance From the New Jersey Department of Transportation

Whereas, the City of Margate recognizes a concern for the safe, orderly and efficient movement of vehicular traffic and pedestrians throughout the City;

Whereas, the safety of pedestrians and bicyclist is of upmost importance and the City has and plans to continue to explore ways to provide for safe access throughout the community;

Whereas, the New Jersey Bicycle and Pedestrian Master Plan has established a vision for the State of New Jersey as a place where people choose to walk or bicycle with confidence and a sense of security; and

Whereas, the New Jersey Department of Transportation provides assistance by assigning consultants with expertise on local bicycle and pedestrian planning to help communities conduct circulation studies focusing on key corridor or activity centers; and

Whereas, the City of Margate wishes to work with the City of Ventnor, Atlantic County and the State of New Jersey to provide safer access for pedestrians and bicyclist throughout the community; and

Whereas, the City of Margate understands that this is a partnership program and the City would commit staff and resources to assist in this effort as needed; and

Whereas, the City of Margate is interested in obtaining Local Pedestrian and Bicycle Planning Assistance; and

Now Therefore Be It Resolved that the governing body of the City of Margate supports an application for Local Pedestrian and Bicycle Planning Assistance;

Be If Further Resolved that the City of Margate with the support of the State and County will make a good faith effort to implement the recommendation of this planning study.

Date: October 16, 2014

I, Thomas D. Hiltner, Clerk of Margate City, Atlantic County, do hereby certify the foregoing to be a true and correct copy of a resolution adopted by the Commissioners of the City of Margate City at a meeting of said Commission held on October 16, 2014 and said resolution was adopted by not less than a two-thirds vote of the members of the Commission.

Thomas D. Hiltner, City Clerk

Appendix B - Meeting Minutes

MEMORANDUM OF MEETING

Project: **Ventnor-Margate Joint Bicycle and Pedestrian Circulation Plan**
Cities of Ventnor and Margate, Atlantic County, NJ

Subject: Steering Committee Meeting #1

Location: Margate Municipal Building
9001 Winchester Avenue
Margate, NJ 08402

Date/Time: 1:30 PM, September 21, 2015

Attended by (sign-in sheet attached):

Diane Birkbeck	Ventnor Green Team	609-576-6822
Michael Miller	Ventnor Police Department	609-823-7929
Monica Coffey	Margate Green Team	609-272-6921
David Wolfson	Margate Police Department	609-822-1151
Audrey Becker	Margate Schools (Tighe Middle)	609-822-2353
John DiNicola	Margate Schools	609-822-1686
Roger Rubin	Margate Zoning Officer	609-822-5438
Mike Wiesen	Bikes Ventnor	609-576-2779
Patrick Farley	Cross County Connection TMA	856-596-8228
Alan Huff	SJTPO	856-794-1941
Jim Rutala	Rutala Associates, LLC	609-743-0354
Bill Riviere	NJDOT-OBPP	609-530-4646
Dave Cox	Urban Engineers	215-922-8081 x1347
Erika Rush	Urban Engineers	215-922-8081 x1654
John Federico	Urban Engineers	215-922-8081 x1358

Invited but did not attend:

Remington & Vernick Engineers
Atlantic County Planning & Development
Ventnor City Board of Education

A kickoff meeting for the Ventnor-Margate Joint Bicycle and Pedestrian Circulation Plan was held on Monday, September 21, 2015 at the Margate Municipal Building in Margate, NJ. The meeting was informal with questions, comments, and other discussion occurring throughout the meeting. Specific discussion items are described below based on the agenda (attached):

Introductions / Opening Discussion

- Following introductions, Bill Riviere described NJDOT's role as project sponsor and said that Urban Engineers, Inc. (Urban) will be providing planning services for this project through a Local Technical Assistance Planning contract with NJDOT.
- Bill described the Steering Committee's role – to provide local knowledge of existing conditions and input/feedback on proposed improvement concepts – and noted this is the first joint bicycle & pedestrian planning project that NJDOT has undertaken.
- Bill then turned it over to Urban Engineers to provide an overview of the project.

Project Overview – Goals & Objectives

- John Federico reviewed the goals and objectives of this project, which include:
  - Improving bicycle and pedestrian safety throughout both cities
  - Addressing walking and bicycling along and across major corridors such as Atlantic Avenue
  - Connecting Ventnor and Margate to the regional bicycle network
  - Providing safe routes for children to walk and bike to school
- Members of the Steering Committee suggested adding the following goals:
  - Focus on safe access to schools (Jim Rutala will provide the Ventnor School Travel Plan to Urban)
  - Determine the best option for biking on the boardwalk in Ventnor

Project Overview – Scope & Product

- John Federico noted that the final report/product could be adopted as part of the local Circulation Elements, and if this is desired the product could be tailored to fit.
- Monica Coffey asked if the report would have physical and non-physical recommendations. Dave Cox responded yes – improvement concepts at a planning level and education and enforcement program recommendations. Urban will provide planning concepts for physical recommendations, which would then need further engineering for design and construction. The planning level recommendations can be used to pursue grants and other funding sources.
- Jim Rutala asked if Urban will be looking into issues related to ADA compatibility. Dave Cox replied that we will be noting ADA issues where observed, but will not be taking a detailed look at whether or not existing facilities are ADA-compatible.

Project Overview – Schedule

- John Federico reviewed the project schedule. The schedule extends until Spring 2016 and includes three meetings with the Steering Committee and two Public Meeting periods.

- Both cities are conducting master plan updates, for which they are engaging separate consultants. Both cities will be starting their planning process in the Fall 2015 with completion intended for the Spring 2016. Jim Rutala will be the Master Plan contact for Ventnor, while Roger Rubin will be the Master Plan contact for Margate. Urban will coordinate with both master planning efforts and will add a master plan coordination meeting to the schedule to break up the initial period between Steering Committee meetings.

Project Overview – Public Outreach

- John Federico said that Urban has developed a website for this project that includes an interactive community map allowing people to provide information about specific issues such as challenging locations for walking/biking or important destinations. He said this has been an effective tool to increase participation on similar projects, and encouraged the Steering Committee to distribute the link through a variety of mediums.

- Public outreach and methods to provide participation opportunities were discussed. Monica noted there has been very good local response to the local Facebook page from both seasonal and year round folks. Both Ventnor and Margate also have monthly e-newsletters that can be used to distribute project information. John Federico noted that Urban typically posts hard copies of project flyers and other materials in key locations to reach those who may not receive or check digital sources.

- Public meetings were discussed. Dave Cox noted that traditional public meetings tend to not be well-attended, and asked if there were local events that could be used to bring the project to the local population. Margate's **Fall FunFest**, which is scheduled for September 26/27, was mentioned as a very popular and well-attended event. Urban will provide materials that can be displayed at the Margate Police and Green Team booths. David Wilson noted that these booths tend to get a lot of traffic.

- Diane Birkbeck of Ventnor's Green Team noted that they have sent out a survey in the past. David Wilson noted that we will probably get a lot of "extraneous" comments to surveys and questionnaires. He asked if Urban has the ability to filter, as he does not want to see this study derailed by comments about items they have already been addressed. John Federico said that Urban will collate comments so that the SC can review and advise.

- Another event that may generate interest in the study is the **Vagabonds bike/bar tour**, which is scheduled for October 4th and typically gets 300-400 participants from the local bicycle community. The owner of Vagabonds is very community-oriented and would likely post or distribute project information.

- **Walk to School Day** (October 7) would be another opportunity to provide information about this project to the community. Urban will develop a brochure or leaflet that can be inserted into each child's backpack.

- It was agreed by the group that the methods of public outreach described above will obviate the need for the first round of in-person public meetings shown on the schedule.

Data Collection & Mapping

- John Federico described data collection efforts to date, which include mapping of road characteristics - traffic signals, volumes, paved widths, posted speeds – along with bicycle/pedestrian crash data (display maps are attached).

- John Federico reviewed the activity generator map and asked the group if any key activity nodes are missing. It was noted that the "Holy Family" school in Ventnor has since closed. The group identified the following activity areas that should be added to the mapping – in Ventnor, the library and community center at Newport Avenue, the tennis courts and playground at Suffolk Avenue, the residential playground at the Derby/Fulton intersection, the ballfields and playground along Surrey Avenue, and the first boardwalk access points at Martindale and Washington Avenues. In Margate, the commercial area along Amherst Avenue should be added. Roger Rubin asked that Urban also show other commercial/shopping areas on the generators map. It was also noted that the three Wawas located within the two cities generate significant activity.

- Roger Rubin said that Margate is currently studying the feasibility of a new 10' wide pedestrian promenade along the bay near Amherst Avenue.

- There was discussion about what hours of the day bicycling is allowed on the boardwalk. Urban recently photographed the posted signage and bicycling is permitted during daylight hours year round; the only restriction is during the summer season (July 1st – Labor Day) when it is not allowed on both Saturdays and Sundays after 12:00 noon. John Federico asked if bicycle/pedestrian user counts are available for the Ventnor boardwalk, but the group wasn't aware of any.

- Roger Rubin expressed concern about the data collection effort since the study is starting after the busy summer season. Dave Cox noted that most of Urban's data collection effort is based on secondary sources and that our goal is to not have the timing be a fatal flaw.

- Michael Miller asked about the traffic signal study that Urban is conducting under a separate contract for SJTPO. John Federico explained that Urban's traffic unit will be analyzing all of the signals along CR 629 through Ventnor and Margate. Jim Rutala asked if the County is responsible for these signals; John responded yes. Michael noted that traffic signal coordination and improvements would be really good for this project's outcome.

- Crash data was discussed. Alan Huff of SJTPO noted that portions of Ventnor Avenue near Dorset Avenue are designated as pedestrian safety corridors. Dave Cox noted that boardwalk crashes do not appear to be captured in the Plan4Safety data, which was used to generate the crash mapping. Alan said that the boardwalk may not be considered a "route" and thus is not included in Plan4Safetey. He also noted that other bike/ped crashes may not make it into the system for various reasons, while non-injury crashes are often not reported. David Wolfson thought that the actual number of crashes could actually be twice what Plan4Safety indicated. Both Margate and Ventnor will provide Urban with local crash data, including data for boardwalk crashes in Ventnor.

Discussion of Needs, Concerns, & Opportunities

- ***Regional Bicycle Network.*** Jim Rutala brought up the need to connect with the bicycle network beyond Ventnor and Margate. While the Margate Bridge heading into Northfield is privately owned, Margate believes it is important to have a conversation about bike accessibility on the bridge as it makes sense from a network standpoint. Jim also noted that the Mayor is very interested in extending a bicycle route into Atlantic City via Wellington/West End Avenue and developing bicycle improvements along that corridor.

- ***Atlantic Avenue (Road Diet).*** Both Margate and Ventnor's Police Chiefs noted that their primary concern on Atlantic Avenue is pedestrian safety. The concept of a road diet was discussed as a way to improve pedestrian and bicycle safety. Michael Miller said they have pulled crash data to examine issues along Atlantic Avenue, and have seen a recent increase in rear end collisions. Dave Cox noted that available traffic data from June 2012 indicates that Atlantic Avenue might be a candidate for a road diet. David Wolfson noted that he was against this idea until he saw how well it was working in Ocean City. Urban will investigate a road diet for Atlantic Avenue as part of this study.

- ***Atlantic Avenue (Bike Lanes).*** Michael Miller said there has not been consensus on an Atlantic Avenue biking option, to-date. Jim Rutala noted that the Mayor of Atlantic City recently asked if Atlantic Avenue could be used for bicycling in Atlantic City. With Margate already having bike lanes, there is a strong need for all three cities to coordinate on this issue. Michael noted that there will need to be good data behind any recommendation for Atlantic Avenue, because a commonly raised concern is that if you add bike lanes there will be an expectation of safety. For example, the existing bike lanes in Margate are only wide enough for bicyclists to ride single file, but some riders want to ride side-by-side, especially in a vacation setting. Dave Cox added that we don't want to jump to recommendations at this early point, as we first need to understand what the SC and public feels are the pressing issues. Bill Riviere noted that connectivity is important and NJDOT strongly supports planning recommendations that support it.

- ***Traffic Calming***. David Wolfson noted that many people use Lagoon Drive and Bay Shore Drive as an alternative route to access the Margate Bridge and avoid the traffic signals on Ventnor Avenue. It is not uncommon in the 7:30 to 9 AM and 3:30 to 6 PM peak periods to have speeding along this route, sometimes as high as 70 MPH. Other local residential streets such as

Monmouth Ave and Fredricksburg Ave are also used to avoid the signals on Ventnor Avenue. What makes the speeding issue particularly important is that these streets are the same routes students use to walk/bike to school, particularly Monmouth Avenue. David Wolfson noted that the benefits of spot enforcement are often temporary; i.e. as soon as the police move away to address another problem the behavior returns.

- ***Bicycling on the Boardwalk.*** Michael Miller asked if there was a way to safely engineer a bicycling solution for the boardwalk in Ventnor, especially since there has not been consensus on an Atlantic Avenue biking option. For instance, can bicycle speeds be controlled? While the speed is posted, it was noted that people on vacation are not always good sign readers. Others thought that speed is not the issue, but instead volume. It was asked if it is a good idea to combine bicyclists and pedestrian on the same facility. John Federico responded that it often depends on the type of rider; i.e. low speed riders such as children may be able to mix with pedestrians but higher speed bicyclists can act more like vehicles. Dave Cox noted that trip purposes also need to be taken into account. For example, the boardwalk appeals to biking families and one of the study's goals is to accommodate all kinds of riders.

- ***Hours of Operation on the Boardwalk.*** There was much discussion about whether or not the current restrictions on bicycling are reasonable. In particular, it was suggested that the restriction to daylight hours might not make sense, especially since the boardwalk has lighting and it gets dark so early in the off-season. For some people, the boardwalk could be a way to commute to Atlantic City jobs but is not because of the restrictions. This results in people either riding on busy traffic streets such as Atlantic Avenue – thus increasing exposure to potential conflicts with vehicles – or driving instead. One idea for the summer season was to allow bicycling during limited afternoon hours – for instance 4:00 to 6:00pm – as has been done in Atlantic City. Another idea was to allow permits for those who want to use the boardwalk for commuting to work. Yet another idea was to create a parallel off-road bicycling facility adjacent to portions of the boardwalk, as was done in North Wildwood.

- ***Low-speed Vehicle Issue***. This is a safety issue that both communities need to examine. Low-speed vehicles – which are similar to golf carts – have been more prevalent recently. These vehicles travel below the posted speed limit and often straddle the parking lane and bike lane, which can cause issues with traffic operations. Margate does not have an ordinance to prohibit their use nor do they intend to institute one, but they would still like a better solution.

- ***Bicycle Parking***. Some sections of sidewalk become overcrowded in the summer because a lack of bicycle parking causes bikes to be parked "wherever" and take up sidewalk space. Some of the more progressive restaurants have begun installing bicycle parking, and bike parking would be very desirable at the beach access points.

- ***Auto Parking***. Urban will look at concepts that may help address Complete Streets goals. Dave Cox noted that if it is proposed to eliminate parking for bicycle/pedestrian improvements, we will look for places to add parking so that there is not a net loss. Often, it is just a matter of better organizing and managing parking. He noted that innovative parking configurations can

accomplish many objectives; for instance, head-out angled parking can provide more spaces than parallel parking while also accommodating bicyclists if designed correctly.

Action Items
As a result of the meeting discussion, the following actions will be taken:

Item	Action	Party
1.	Provide materials for Fall Funfest (9/26-27) to David Wolfson	Urban
2.	Distribute an electronic flyer advertising the project/website to the Steering Committee	Urban
3.	Provide materials for Vagabond Bike Ride (10/4) to Mike Wiesen	Urban
4.	Develop brochure/leaflet that can be distributed to students at Walk to School Day (10/7)	Urban
5.	Provide local crash data to Urban, including boardwalk crashes	Margate/ Ventnor PDs
6.	Provide Ventnor School Travel Plan to Urban	Jim Rutala
7.	Provide consultant contact information for Master Plan updates to Urban	Jim Rutala/ Roger Rubin
8.	Update "activity generator" map	Urban

It is believed that the enclosed represents an accurate description of the major events that transpired at this meeting. Your notification of any errors or omissions is essential, as the foregoing is intended to be part of the record, and is the basis upon which we will proceed.

Respectfully submitted,

URBAN ENGINEERS, INC.

John Federico, PE, PP, AICP

cc: Attendees
Project File

Att: Agenda
Sign-in Sheet
Display Maps

MEMORANDUM OF MEETING

Project: **Ventnor-Margate Joint Bicycle and Pedestrian Circulation Plan**
Cities of Ventnor and Margate, Atlantic County, NJ

Subject: Steering Committee Meeting #2

Location: Margate Municipal Building
9001 Winchester Avenue
Margate, NJ 08402

Date/Time: 10:00 AM, February 19, 2016

Attendees (Steering Committee):

Diane Birkbeck	Ventnor Green Team (by phone)
Doug Biagi	Ventnor Police Captain
Charles Sabatini	Ventnor City, Engineer
Jim Pacanowski	Ventnor Board of Education
Jay Cooke	Ventnor Planning Board Chairman
Mike Wiesen	Bikes Ventnor
Monica Coffey	Margate Green Team
David Wolfson	Margate Police Chief
Roger McLarnon	Margate City, Engineer
John Amodeo	Margate City, Commissioner
Michael Becker	Margate City, Mayor
Ryan McGowan	Remington Vernick & Walberg Engineers
Joseph Johnston	Remington Vernick & Walberg Engineers
Patrick Farley	Cross County Connection TMA
Alan Huff	SJTPO
John Peterson	Atlantic County Planning
Jim Rutala	Rutala Associates, LLC
Bill Riviere	NJDOT-OBPP
Dave Cox	Urban Engineers
John Federico	Urban Engineers

Attendees (Public):

David Goodelman	Margate Resident

A second Steering Committee meeting for the Ventnor-Margate Joint Bicycle and Pedestrian Circulation Plan was held on Friday, February 19, 2016 at the Margate Municipal Building in Margate, NJ. Following introductions, John Federico of Urban Engineers, Inc. (Urban) provided a project update via a slideshow presentation. He presented an overview of Urban's data collection and analysis efforts, summarized input from the project website, and then presented preliminary plan concepts. The presentation was informal and open to questions, comments, and discussion throughout. Specific discussion items are described below by theme or geographic area:

Existing Conditions

- John Federico confirmed that Urban is using 2015 summer-season traffic count data along CR 629 that is available through an on-going SJTPO study. This data includes pedestrian counts at signalized intersections.
- Margate officials confirmed that parking is prohibited on the beach blocks between 10:00 AM and 5:00 PM during the summer season, and noted that the "no parking" signs are removed during the off-season.
- Ventnor officials confirmed that the boardwalk is lit year-round at night. Jim Rutala noted that the hours of operation for bicycles on Atlantic City's boardwalk were recently expanded, and will provide this information to Urban.
- One member asked if the existing traffic signals along Atlantic Avenue could be synchronized to maintain a 25-30 mph traffic flow. Dave Cox noted that Urban obtained signal information from the police departments. The existing equipment is old and not to today's standards, but can be set up for synchronization. However, for most of the improvement concepts presented for Atlantic Avenue, the signals would need to be replaced.

Ventnor Avenue/Dorset Avenue (CR 629)

- Of the options discussed for CR 629, the County expressed a preference for buffered bike lanes because they would improve pedestrian conditions and provide for bike travel while retaining the same number of travel lanes.
- One member questioned if bike lanes on CR 629 would exacerbate traffic by complicating on-street parking manuevers; however, it was noted that there would still be physical space for through vehicles to pass vehicles that are parking.
- Doug Biagi noted that the outermost lane on EB Ventnor Avenue approaching Dorset Avenue is meant to operate as a bus-only lane.
- Eileen Johnson noted that the plan should take into consideration that CR 629 is heavily used by school buses.

Atlantic Avenue

- Regarding a potential median on Atlantic Avenue, it was noted that a landscaped median was instituted on Atlantic Avenue in Atlantic City but was then subsequently removed. Further discussion revealed that the median was removed due to design issues related to sight distance caused by the landscaping, rather than the presence of the median itself.
- Dave Cox noted that the options presented for Atlantic Avenue are concepts at this point. He emphasized that this is a planning-level study, and any plan recommendations for Atlantic Avenue will likely require further study – particularly related to the signals, traffic operations, parking, and intersection layout.
- John Federico noted that, considering the low traffic volumes on intersecting streets, the primary function for many of the traffic signals along Atlantic Avenue is to provide protected pedestrian crossings of the existing 4-lane section. He noted that the 3-lane section options may present an opportunity to reduce the number of signalized intersections along Atlantic Avenue by significantly improving pedestrian crossings and thus reducing the need for protected crossings. Fewer signals on Atlantic may help to maintain or even improve traffic operations compared to today's conditions.

Jerome Avenue (CR 563)

- The committee agreed that the pedestrian crossing situation on Jerome Avenue needs to be improved, particularly in front of the JCC where people routinely cross midblock and there have been recent injuries. A road diet (5 lanes to 3 lanes) on Jerome Avenue coupled with median refuge islands would allow pedestrians to cross one lane of traffic at a time and also provide space for bicycle facilities. The County said that they would be amendable to considering a road diet on Jerome Avenue if the community is supportive.
- Diane Birbeck asked about the potential use of Pedestrian Hybrid Beacons (PHBs) on Jerome Avenue. She noted this treatment has been implemented on 9th Street in Ocean City. Urban agreed that, in the absence of a road diet, Pedestrian Hybrid Beacons (PHBs) would be an option at non-signalized crossing locations along Jerome.

School Access & Other Focus Areas

- John Federico mentioned the possibility of implementing "seasonal" bicycle lanes on Monmouth and Winchester Avenues, which would allow for on-street parking on both sides during the summer season and bicycle lanes with one side of parking during the school year. David Wolfson said that providing kids with safer bicycle travel to these schools is very important – especially given the crash history on these roads – and suggested that the bicycle lanes should be in place year round rather than seasonal.
- Stop control along Monmouth and Winchester was discussed as a means to improve pedestrian crossings and discourage these routes as cut-throughs. David Wolfson noted that Margate has attempted to add stop control to these roads in the past, but has not been able to meet warrants except in areas near the schools. Patrick Farley noted that if the idea is to create a bike boulevard along these streets, stop control may not be desirable. Urban will investigate this issue in more detail as part of the plan.
- John Federico noted that the plan will also provide recommendations to improve walking and biking conditions at the intersection of Washington Avenue and Ventnor Avenue (near Wawa).

David Wolfson noted that Margate has had conversations with Wawa about modifying their parking/circulation to improve conditions along the street frontage. Urban will provide David with an initial concept plan that they developed for this area.

- Alan Huff asked if this plan will be providing recommendations for bicycle parking locations; John Federico affirmed. Alan noted that a coordinated plan for bicycle parking throughout Ventnor and Margate could make an excellent application to FHWA's CMAQ and/or TAP programs.

Next Steps

- John Federico noted that both communities have expressed an interest in holding an initial round of public meetings in March 2016 to solicit public input on the planning process. Jim Rutala offered to coordinate times and locations for these meetings. The committee agreed that a separate public meeting in each municipality would be preferable, so that the materials can be tailored to each community's individual needs. However, it was noted that the final public meeting would likely be a single meeting for both municipalities.

Action Items
As a result of the meeting discussion, the following actions will be taken:

Item	Action	Party
1.	Provide Urban with expanded boardwalk hours in AC	Jim Rutala
2.	Provide a concept plan for improving walking/biking conditions near Wawa to Margate	Urban
3.	Coordinate an initial round of public meetings in March	Jim Rutala

It is believed that the enclosed represents an accurate description of the major events that transpired at this meeting. Your notification of any errors or omissions is essential, as the foregoing is intended to be part of the record, and is the basis upon which we will proceed.

Respectfully submitted,

URBAN ENGINEERS, INC.

John Federico

John Federico, PE, PP, AICP

cc: Attendees

Att: Agenda
Sign-in Sheet

MEMORANDUM OF MEETING

Project: **Ventnor-Margate Joint Bicycle and Pedestrian Circulation Plan**
Cities of Ventnor and Margate, Atlantic County, NJ

Subject: Steering Committee Meeting #3

Location: Margate Municipal Building
9001 Winchester Avenue
Margate, NJ 08402

Date/Time: 1:00 PM, June 22, 2016

Attended by (sign-in sheet attached):

Diane Birkbeck	Ventnor Green Team
Lance Landgraf	Ventnor Commissioner
Jay Cooke	Ventnor Planning Board
Mike Wiesen	Bikes Ventnor
Monica Coffey	Margate Green Team
Rich Deaney	Margate Administrator
David Wolfson	Margate Police Department
Roger McLarnon	Margate Zoning Officer
John Amodeo	Margate Commissioner
John DiNicola	Margate Public Schools
Richard Patterson	Margate Planning Board
Ryan McGowan	Remington Vernick & Walberg Engineers (RVE)
Stuart Wiser	Remington Vernick & Walberg Engineers (RVE)
Ed Walberg	Remington Vernick & Walberg Engineers (RVE)
Patrick Farley	Cross County Connection TMA
Alan Huff	SJTPO
John Peterson	Atlantic County Planning
Jim Rutala	Rutala Associates, LLC
Bill Riviere	NJDOT-OBPP
Dave Cox	Urban Engineers
John Federico	Urban Engineers

A third Steering Committee meeting was held for the Ventnor-Margate Joint Bicycle and Pedestrian Circulation Plan on Wednesday, June 22, 2016 at the Margate Municipal Building in Margate, NJ. Following introductions, John Federico of Urban Engineers, Inc. (Urban) provided a project update via a slideshow presentation. He presented a brief overview of Urban's data collection and analysis efforts, summarized input from Public Meeting #1 and the project website, and then presented preliminary plan concepts. Specific discussion and action items are listed below:

- Atlantic City will pass an ordinance soon to expanding bicycling hours by 2 hours on the boardwalk during the peak summer period from the current hours of 6:00 to 10:00 am to 6:00 am to 12 noon.
- Sign pollution is a community concern and should be taken into consideration with any recommendations for new signage.
- Routes not shown as having a specific bike treatment are those that are low speed (<25mph), low volume and residential in character and are "bikeable" or bike compatible without having to provide bike treatments.
- As part of the Circulation Plan update, RVE is evaluating establishing a pedestrian corridor with improvements along the Washington Avenue corridor in Margate. Urban will coordinate with RVE and propose concepts in this area.
- Shared Lane Markings (SLM) were suggested as a short term alternative to paired bike lanes along Monmouth and Winchester Avenues, so as not to lose any parking on these streets. Urban will incorporate into their recommendations.
- The following revisions were suggested to the Bicycle Network Plan:
    - Label the boardwalk and show in the legend as a bicycle facility
    - In Ventnor Heights, add bike treatments to selected roads (TBD) to access the recreational facilities on Surrey Avenue
    - Develop improvement concepts on Wellington Avenue
- Providing adequate bike parking/storage is very important to both encouraging and accommodating bicycle use in both communities.
- Education is an important part of the plan. It was suggested that information regarding NJ's "Stop and Stay Stopped" law could be distributed to visitors at key locations including hotels and tourist destinations.
- The plan should provide guidance on grant programs that could be potential funding sources for plan recommendations.
- SJTPO noted that the Transportation Alternatives Program is a potential funding source for the capital costs of a bikeshare program (but not the operating costs).
- The committee agreed that a separate public meeting in each municipality is desired for the final round of public meetings. An Open House with plans display followed by a presentation and Q & A was recommended. Jim Rutala will schedule the time and locationof these meetings.

Action Items
As a result of the meeting discussion, the following actions will be taken:

Item	Action	Party
1.	Revise Atlantic City Boardwalk hours	Urban
2.	Coordinate with RVE regarding Washington Avenue pedestrian improvements	Urban
3.	Update Bicycle / Pedestrian Network Plan per comments	Urban
4.	Incorporate a SLM option for Monmouth-Winchester	Urban
5.	Distrbute the presentation material with the meeting minutes	Urban
6.	Schedule final round of public meetings	Jim Rutala

It is believed that the enclosed represents an accurate description of the major events that transpired at this meeting. Your notification of any errors or omissions is essential, as the foregoing is intended to be part of the record, and is the basis upon which we will proceed.

Respectfully submitted,

URBAN ENGINEERS, INC.

John Federico, PE, PP, AICP

cc: Attendees
Project File

Att: Agenda
Sign-in Sheet

Appendix C - Public Meeting Materials

VENTNOR–MARGATE
BICYCLE & PEDESTRIAN PLAN

MARGATE PUBLIC MEETING
TUESDAY, MARCH 29

5:00 TO 7:00 PM
5:30 PM - PRESENTATION
6:00 PM - PLANS DISPLAY

MARGATE MUNICIPAL BUILDING
PUBLIC MEETING ROOM
9001 WINCHESTER AVENUE

The Cities of Ventnor and Margate are collaborating on a plan to improve bicycling and walking conditions in their communities. The study will be evaluating ways to create a safer environment for kids walking and biking to local schools, connect Ventnor and Margate with regional bike paths on the island and mainland, enhance pedestrian and bicycle facilities in the business districts, and increase safety and mobility for non-motorized traffic on roads such as Ventnor, Atlantic, Jerome, Monmouth, Winchester, and Dorset Avenues. The purpose of this public meeting is to present an overview of the study and receive input on initial concepts, some of which would affect traffic and/or parking on city streets. Your participation and input are vital to a successful project! You can also visit the project website to provide input and stay updated on the study's progress:

ventnor-margate.com

This Bicycle & Pedestrian Study is funded by the New Jersey Department of Transportation – Office of Bicycle and Pedestrian Programs (NJDOT-OBPP) and staffed by Urban Engineers, Inc.

VENTNOR–MARGATE
BICYCLE & PEDESTRIAN PLAN

VENTNOR PUBLIC MEETING
WEDNESDAY, MARCH 30

5:00 TO 7:00 PM
5:30 PM - PRESENTATION
6:00 PM - PLANS DISPLAY

VENTNOR ELEMENTARY SCHOOL
AUDITORIUM
400 N. LAFAYETTE AVENUE

The Cities of Ventnor and Margate are collaborating on a plan to improve bicycling and walking conditions in their communities. The study will be evaluating ways to create a safer environment for kids walking and biking to local schools, connect Ventnor and Margate with regional bike paths on the island and mainland, enhance pedestrian and bicycle facilities in the business districts, and increase safety and mobility for non-motorized traffic on roads such as Ventnor, Atlantic, Jerome, Monmouth, Winchester, and Dorset Avenues. The purpose of this public meeting is to present an overview of the study and receive input on initial concepts, some of which would affect traffic and/or parking on city streets. Your participation and input are vital to a successful project! You can also visit the project website to provide input and stay updated on the study's progress:

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PUBLIC MEETING #1 - ADVERTISEMENT IN ATLANTIC CITY PRESS

Bike plan's affect on Margate, Ventnor traffic planned for Tuesday night

Posted: Tuesday, August 9, 2016 11:00 am

MICHELLE BRUNETTI POST

There will be a meeting at 5 p.m. Tuesday, Aug. 9, at Margate City Hall to learn about options for improving pedestrian and bicycle safety in Margate and Ventnor, some of which would affect traffic and parking on city streets.

The two cities are working together on a plan to create a safer environment for children walking or biking to schools, to connect Ventnor and Margate with regional bike paths on the island and mainland, to enhance walking and biking facilities in the business districts, and to increase safety and mobility for walkers and bikers, according to organizers.

Danny Drake

Dave O'Neill, of Ventnor, rides his bike down Atlantic

The plan will provide a foundation for future projects and grant funding, organizers said.

A meeting was held in Ventnor Monday night, and Tuesday's will be at Margate City Hall, 9001 Winchester Ave. It will start with plans on display from 5 p.m. to 6 p.m. There will be a presentation at 6 p.m. followed by a discussion and question and answer period.

The first round of public meetings in March 2016 presented an overview of the study and initial concepts, according to organizers.

Related Stories

PUBLIC MEETING #1 - COVERAGE IN THE CURRENT

Residents hear options for improving pedestrian and bicycle safety in two shore towns

By NANETTE LoBIONDO GALLOWAY Staff Writer | Posted: Thursday, March 31, 2016 3:00 pm

GE#Shg#Elnh#Vdihw|#Phhw#373:#+4,1MSJ

Residents gathered at two information sessions held March 29 and 30 to share options and solicit input for improving pedestrian and bicycle safety in Ventnor and Margate.

The two communities are working together to develop citywide bicycle and pedestrian circulation plans that would make it easier and safer for all modes of transportation, according to John Federico of Urban Engineers, Inc., the engineering firm selected by the New Jersey Department of Transportation to develop the planning document. The study, which includes individual plans for each community, is being funded by the NJDOT's Office of Bicycle and Pedestrian Programs.

Grant writer James Rutala of Rutala Associates of Linwood, who has been successful obtaining grants for both communities, said the study is the first step in obtaining federal and state grants that could help fund roadway improvements.

"You are an important part of the process," Rutala told those attending the Margate meeting on Wednesday, March 29. "A plan like this requires consensus."

Rutala said a steering committee comprised of local municipal and school officials, police, and representatives of Downbeach green teams and potential funding sources, such as the South Jersey Transportation Planning Organization and Cross-County Connection, helped identify problem areas for the initial phase of the study.

Urban Engineers used data and community input gleened from the www.ventnor-margate.com website, which contains a map of the Absecon Island communities that allows visitors to "pin" what they consider dangerous intersections or problem areas, to complete an analysis of current conditions. More than 245 map points were identified and 104 written suggestions were received, Federico said.

At the meetings, Federico presented information about present conditions in both communities, and accepted comments from the public on a series of initial concepts that could help improve safety and calm traffic.

"There are other benefits to having safe bicycle and walking routes," Federico said, "such as improving public health, enhancing the local economy, making a community more livable and improving mobility."

Urban Engineers compiled information including crash data over the last 10 years, current traffic signalization, posted speed limits, traffic counts, street widths, bus routes, and distilled all that information into maps showing "crash cluster" areas.

The traffic study showed there were 112 pedestrian accidents and 146 bicycle accidents in Ventnor and Margate. Crashes were concentrated along major routes, with 33 percent of them on Ventnor Avenue, 22 percent on Atlantic Avenue – including one fatality – and 8 percent on Dorset Avenue. Focus areas included business districts in both communities. Also cited was the area near Lucy the Elephant, Jerome Avenue near the Jewish Community Center in Margate, the intersection of Dorset and Ventnor avenues, and the narrow sidewalk on the Dorset Avenue bridge where there are conflicts for bikers and pedestrians. In both communities, beachgoers trying to cross the 70-foot wide Atlantic Avenue and safe routes to the public schools are problematic.

Pedestrian treatments under consideration in both communities include constructing highly visible crosswalks, constructed or painted curb extensions that shorten walking distances for pedestrians and refuge areas that provide a safety zone for pedestrians crossing four lanes of traffic.

Bicycle treatments could include establishing bicycle lanes that flow with traffic, or a separated bikeway with bicycle traffic flowing in both directions. "Buffered" bike lanes containing a 2-foot striped area between the bike lane and on-street parking areas would prevent "dooring" that happens when a driver opens their car door and bicycle crashes occur.

Matthew Conlon of Atlantic City, who was severely injured when he was "doored" riding his bicycle on Martindale Avenue in Ventnor in 2014, said something has to be done to improve bicycle safety, especially to protect children. After several surgeries and 18 months of rehabilitation, he is finally able to walk again, he said.

"You have to do something to tie in the bike lane from Margate into Ventnor and into Atlantic City. One of these plans will help. I am an adult and I can accept what happened to me, but we have a lot of children riding around. We need to do something now pro-actively to prevent this happening to a child," he said.

Both Ventnor and Atlantic avenues are wide enough to accommodate bicycle lanes, Federico said.

Roadway configuration options include keeping the current four lane configuration, but eliminating parking on the beach side of Atlantic Avenue to accommodate a bikeway that allows bicycle traffic to flow in both directions; or switching to a three lane configuration, called a “road diet,” with one lane of automobile traffic going in each direction and a center turn lane, which would calm traffic, provide pedestrians with a safety area when crossing the street, and provide enough room for bicycle lanes in each direction.

“Road diets provide benefits and improve safety for all modes of transportation,” Federico said.

Roadways with more than 20,000 vehicles a day are ideal candidates for road diet plans, he said.

Road diets have been shown to reduce crashes by 19-47 percent, he said.

Ventnor resident Beth Kwart said she favors striping bike lanes with a center turn lane option.

“Traffic is terrible anyway. The best you can do is make it safer. We shouldn’t wait until a kid gets killed.”

Options also include reducing the 35-miles-per-hour speed limit to 25-miles-per-hour and upgrading traffic signalization or even removing some traffic lights.

“All these options need more study, but are definitely worth looking at,” Federico said.

Ventnor could also consider coordinating with Atlantic City to allow bike riding on the boardwalk during evening hours, so workers can commute to their jobs in the casinos, he said.

Margate Planning Board Chairman Richard Patterson said road configuration changes along Atlantic and Ventnor avenues could divert more traffic to Monmouth and Amherst avenues, where schools are located.

Mayor Michael Becker assured Patterson that the planning board would get to review any plan that is recommended.

Part-time Margate resident Bruce McLeod, an avid bike rider, said he likes the idea of improving bicycle access, “but Margate needs to improve its infrastructure first. The pavements are not as good as they used to be,” he said.

Mike Iepson, a retired police officer who lives in Margate, said bicyclists and pedestrians are partially at fault.

“They are trying to fix a problem that doesn’t exist,” he said at the Margate meeting. “If pedestrians and bicyclists would follow the law, we wouldn’t have this problem.”

And enforcement is difficult, he said.

“When I was an officer I never wrote such a ticket. I was too busy fighting crime. We didn’t have time to write tickets.”

Several residents at the Ventnor meeting pointed to another Downbeach town as getting it right when it comes to traffic enforcement.

“When you drive into Longport, you immediately slow down, because if you speed, you will get a ticket,” Conlon said.

Joe DiGirolamo said education is the key to improving safety.

“One solution is to write on the back of each beach tag to cross with the light, not against it,” he said.

Ed Berger, president of the Margate Business Association, said he would have liked the MBA to be represented on the steering committee.

“The business community needs a seat at the table, so we can have our voices heard,” he said. “Putting in a bike route will attract even more people to come here, but business owners are concerned about losing parking spaces. Hopefully, we can strike a balance,” he said.

At the Ventnor meeting, several residents opposed any changes that would eliminate parking spaces.

“Where are we supposed to park?” one woman called out from her seat in the audience.

Commissioner Theresa Kelly said no matter which plan is recommended, it should take parking into consideration.

“We cannot lose a single parking space,” she said.

Documents from both meetings will be posted to the ventnor-margate.com website where residents and visitors can still provide input on the plan.

Over the next several weeks, concepts will be refined and a draft plan developed, Federico said.

A second round of public meetings will be held in May or June to review recommendations, and a final draft of the reports will be presented to the governing bodies of each town by June or July, he said.

VENTNOR–MARGATE
BICYCLE & PEDESTRIAN PLAN

VENTNOR PUBLIC MEETING #2
MONDAY, AUGUST 8TH

5:00 TO 7:00 PM	VENTNOR CITY HALL
5:00 TO 6:00 PM - PLANS DISPLAY 6:00 TO 6:30 PM - PRESENTATION 6:30 PM - DISCUSSION/Q&A	2ND FLOOR MEETING ROOM 6201 ATLANTIC AVENUE VENTNOR, NJ 08406

Your participation and input are vital to a successful project!

The Cities of Ventnor and Margate are collaborating on a plan to improve bicycling and walking conditions in their communities. The study is evaluating ways to create a safer environment for kids walking and biking to schools, connect Ventnor and Margate with regional bike paths, enhance pedestrian and bicycle facilities in the business districts, and increase safety and mobility for non-motorized traffic.

The first public meeting in March 2016 presented an overview of the study and initial concepts. The purpose of this final public meeting is to present a draft plan of options for Ventnor and Margate to consider in the future, some of which would affect traffic and/or parking on city streets. The plan will provide a foundation for future projects and grant funding.

ventnor-margate.com

This Bicycle & Pedestrian Study was jointly initiated by resolutions from Ventnor and Margate and is funded by the New Jersey Department of Transportation – Office of Bicycle and Pedestrian Programs (NJDOT-OBPP) and staffed by Urban Engineers, Inc.

VENTNOR–MARGATE
BICYCLE & PEDESTRIAN PLAN

MARGATE PUBLIC MEETING #2
TUESDAY, AUGUST 9TH

5:00 TO 7:00 PM	MARGATE MUNICIPAL BUILDING
5:00 TO 6:00 PM - PLANS DISPLAY 6:00 TO 6:30 PM - PRESENTATION 6:30 PM - DISCUSSION/Q&A	PUBLIC MEETING ROOM 9001 WINCHESTER AVENUE MARGATE, NJ 08402

Your participation and input are vital to a successful project!

The Cities of Ventnor and Margate are collaborating on a plan to improve bicycling and walking conditions in their communities. The study is evaluating ways to create a safer environment for kids walking and biking to schools, connect Ventnor and Margate with regional bike paths, enhance pedestrian and bicycle facilities in the business districts, and increase safety and mobility for non-motorized traffic.

The first public meeting in March 2016 presented an overview of the study and initial concepts. The purpose of this final public meeting is to present a draft plan of options for Ventnor and Margate to consider in the future, some of which would affect traffic and/or parking on city streets. The plan will provide a foundation for future projects and grant funding.

ventnor-margate.com

This Bicycle & Pedestrian Study was jointly initiated by resolutions from Ventnor and Margate and is funded by the New Jersey Department of Transportation – Office of Bicycle and Pedestrian Programs (NJDOT-OBPP) and staffed by Urban Engineers, Inc.

PUBLIC MEETING #2 - ADVERTISEMENT IN THE CURRENT

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Pedestrian, bicycle safety plan meetings scheduled

Nanette LoBiondo Galloway Updated Jul 23, 2016

Two final public meetings will be held in early August to present a draft of the Ventnor-Margate Bicycle and Pedestrian Plan, offering options for creating a safer environment for walking and bicycling in Ventnor and Margate.

The first public meetings were held in March and presented an overview of initial concepts. The August meetings will present options for the municipalities to consider when planning future projects and applying for grants to complete roadway improvements.

The plan is being funded through the New Jersey Department of Transportation Office of Bicycle and Pedestrian Programs. Urban Engineers was hired to complete the plan.

Ventnor's meeting will be held 5-7 p.m. Monday, Aug. 8 at Ventnor City Hall, 6201 Atlantic Ave. Margate's meeting will be held 5-7 p.m. Tuesday, Aug. 9 at Margate Municipal Building, 9001 Winchester Ave.

At both meetings, plans will be on display from 5 to 6 p.m., with presentations at 6 p.m. followed by question-and-answer sessions.

For more see ventnor-margate.com.

Nanette LoBiondo Galloway

PUBLIC MEETING #1 - COVERAGE IN THE CURRENT

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Ventnor, Margate commissioners to decide on bicycle, pedestrian safety improvements

By NANETTE LoBIONDO GALLOWAY Staff Writer Updated 13 min ago

Commissioners in Ventnor and Margate will be the ones to decide which bicycle and pedestrian safety improvements, if any, they will implement in their towns.

“Nothing will happen without the full support of the governing body and the freeholders,” planner James Rutala said.

Urban Engineers, Inc. presented the plans at public meetings held in Ventnor and Margate Aug. 8 and 9 that garnered additional feedback from the public. The plans include several options designed to make local roads safer for pedestrians, bicyclists and children who walk or ride their bikes to school.

The planning document was funded at no cost to the municipalities through New Jersey Department of Transportation Office of Bicycle and Pedestrian Programs, and provides the foundation to obtain federal and state grants to fund improvements, Rutala said.

Margate has already received several grants to make improvements, including $300,000 to do streetscapes in commercial districts following Hurricane Sandy. Both towns were recently awarded a $275,000 grant to install bike racks at beachfront street ends and in high-use areas. And Margate has submitted a grant application to make improvements that provide students with safe routes to their

schools, Rutala said. Atlantic County was also recently awarded a $3.5 million grant to replace all the traffic lights on County Route 629, which includes Wellington, Dorset and Ventnor avenues all the way to Longport.

The "Complete Streets" concept is being implemented nationwide, according to John Federico of Urban Engineers. The recommendations in the study will make the streets safer for users of all ages and abilities, he said. The improvements also address health and fitness, encouraging people to bike or walk instead of driving.

The study was completed with community input during public meetings held in March and on the ventnor-margate.com website, where community members identified more than 60 troublesome areas. A final draft plan will be completed in the fall and forwarded to the governing bodies in both towns. If the towns decided to proceed with improvements, additional, more detailed studies would be necessary to apply for grants, Federico said.

Common themes emerged in both communities, including making Atlantic and Ventnor avenues and school zones safer for pedestrians and bicyclists, and providing education and enforcement.

At meetings held Monday, Aug. 8 in Ventnor and Tuesday in Margate, residents said more enforcement is needed. They pointed to Longport, where going over the posted speed limit will surely get motorists a ticket.

"The improvements have to be part of a comprehensive education plan that focuses on motorists, bicyclists and pedestrians," Federico said.

Enforcement strategies could include flashing speed signs, training and support for police. Engineering can "self-enforce behavior," Federico said, because the roadway will be organized so that all users have their own travel lanes.

The plan recommends improving specific problems areas, such as the Dorset and Ventnor Avenue intersection and the Dorset Avenue bridge in Ventnor; Fulton and Huntington Avenue intersection, Jerome Avenue, and Decatur Avenue near Lucy the Elephant in Margate; and at schools in both communities. The plan also recommends policy and ordinance revisions, including reducing the speed limit from 35-miles-per-hour to 25-miles-per-hour on Atlantic Avenue.

Road diets, which include one lane of traffic in each direction, with a center turn lane and buffered bicycle lanes, were recommended for Atlantic, Ventnor and Jerome avenues. The road diets will slow traffic, provide a dedicated, buffered lane for bicyclists, and bump outs at intersections will make it easier for pedestrians to cross the street, Federico said.

The plan recommends consistent treatments throughout the Absecon Island corridor, including crosswalk and bicycle lane striping in all communities. The plans will not affect parking, he said.

Atlantic City has already completed its plan, and has implemented recommendations, including changing bicycle hours on the Boardwalk to 6 a.m. to 12 p.m. Ventnor should also consider changing hours to 6 a.m. to 12 p.m. in summer, and all hours off-season, and adding signage instructing bicyclists to slow speeds and yield to pedestrians, he said.

Ventnor Commissioner of Public Works Lance Landgraf, who is also a planner, said that he changed his opinion about redesigning the four-lane Atlantic Avenue corridor.

"At first I was totally against the road diet, but as I did more research, I completely changed my mind," Landgraf said. "Reducing from four lanes to two with a center turn lane will be much safer. All three commissioners in Ventnor agree that our priorities are Atlantic Avenue and a safe route to our schools."

Also recommended in the report is a bike path on the beach in Margate, similar to bike paths in North Wildwood and Venice Beach, California.

Commissioners in Margate took the report under advisement.

"It was an impressive presentation. We will have to talk about it, but a decision on the bike path on the beach depends on what happens with the dunes," Mayor Michael Becker said.

Commissioner Maury Blumberg said he liked the idea of a bike path on the beach, but would prefer to bring back the boardwalk.

"It's something that has to be looked at when they build the dunes," he said.

The presentations and display boards are posted on the ventnor-margate.com website, where the public can provide additional suggestions.

A video about "road diets" is posted on the NJ DOT website at http://www.state.nj.us/transportation/eng/completestreets/roaddiet.shtm

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Nanette LoBiondo Galloway

Appendix D - Road Diet Information

3-Lane Section: Why Consider A Road Diet?

Benefits of Road Diets

Road Diets provide benefits to users of all modes of transportation, including bicyclists, pedestrians, and motorists.

What Roads are Candidates?

AADT up to 20-25,000 vehicles/day

For More Information Visit:

Federal Highway Administration's (FHWA) Road Diet Informational Guide:

www.safety.fhwa.dot.gov

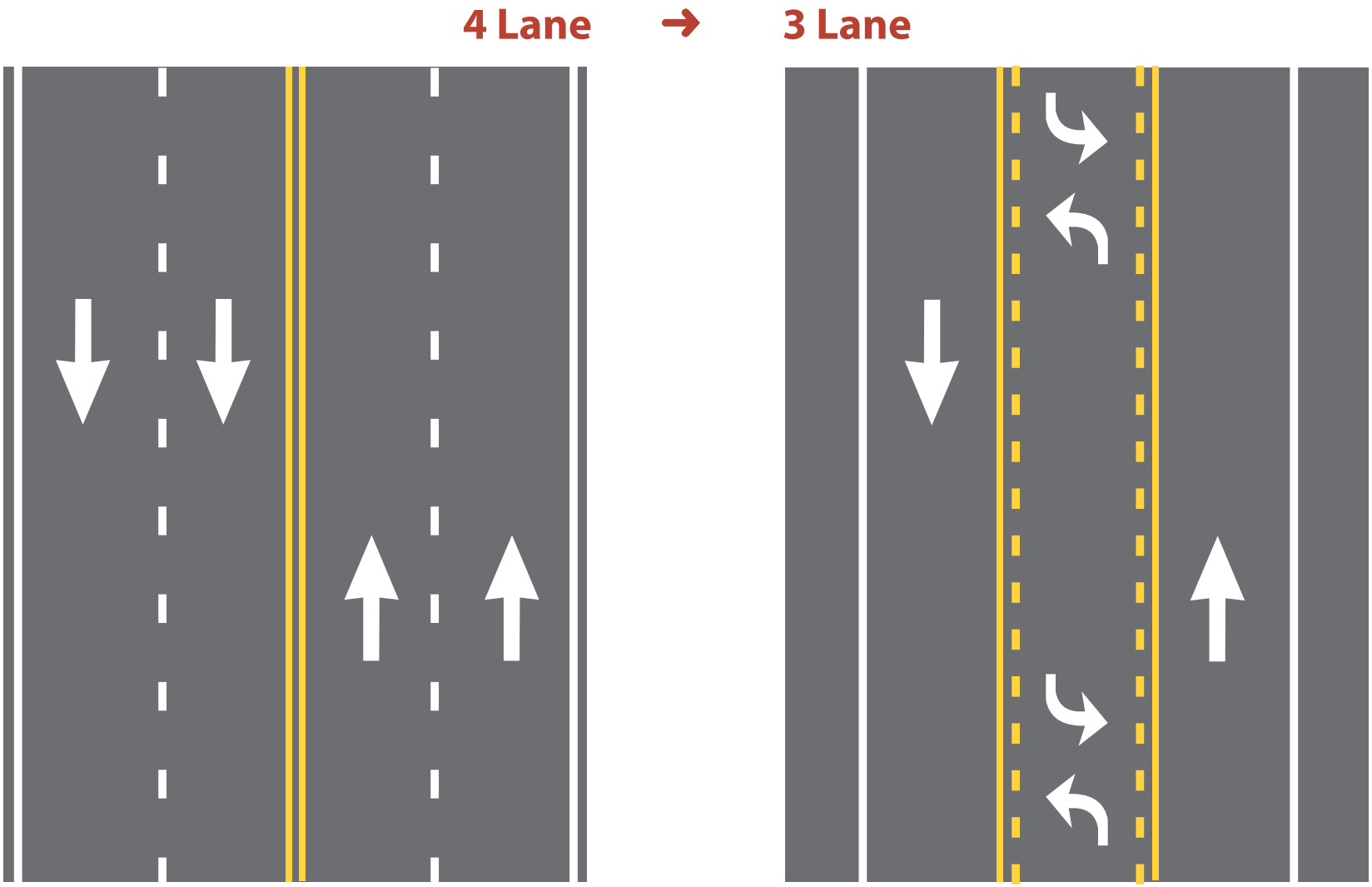
NJDOT video about Road Diets in New Jersey:

http://www.state.nj.us/transportation/eng/completestreets/roaddiet.shtm

- **Crash reduction** of 19 to 47 percent.
- **Reduction of rear-end and left-turn crashes** through the use of a center two-way left-turn lane (TWLTL).
- **Reduced right-angle crashes** as side street motorists must cross only three lanes of traffic instead of four.
- **Reduced speed differential** due to one lane of traffic in each direction.
- Encourages a more community-focused, **"Complete Streets" environment**.
- **Fewer lanes for pedestrians to cross** and an opportunity to install pedestrian refuge islands.
- The opportunity to install **bicycle lanes** within existing cross section.
- The opportunity to **allocate the "leftover" roadway width for on-street parking, transit stops, or other functions**.
- **Simplifying road scanning and gap selection** for motorists making left turns from side streets or the mainline.

Source: Road Diet Brochure (FHWA)

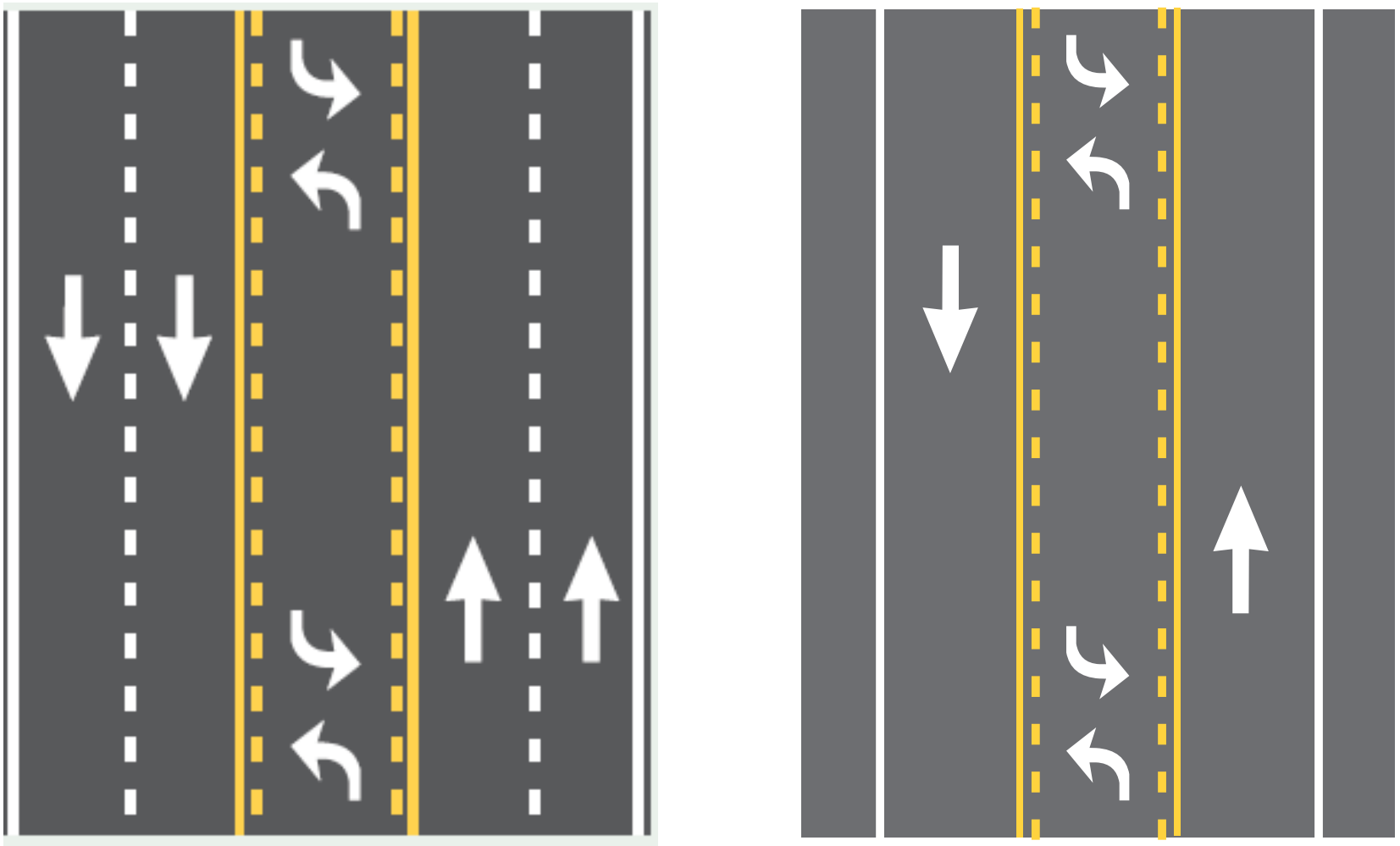
Types of Road Diets



Source: Road Diet Informational Guide (FHWA)

Types of Road Diets

5 Lane → 3 Lane

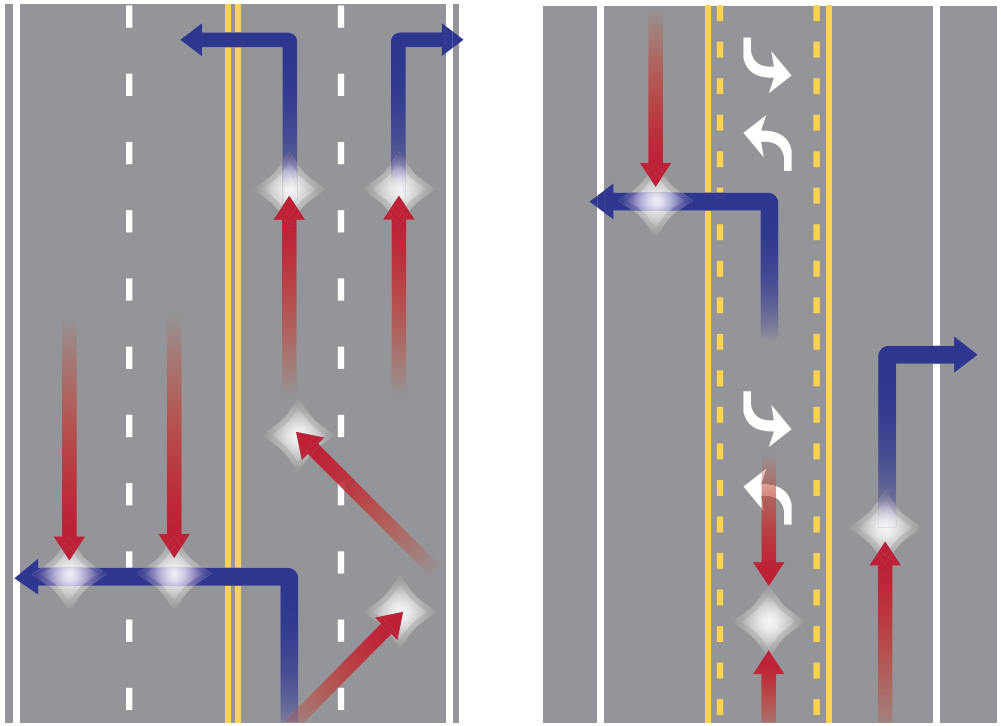


Source: Road Diet Informational Guide (FHWA)

Vehicular Safety

A Proven Safety Counter-measure

- Left (inside) lane is shared by higher speed thru traffic and left-turning traffic
- Road Diets reduce conflict points that contribute to **rear-end, left-turn, and sideswipe crashes**



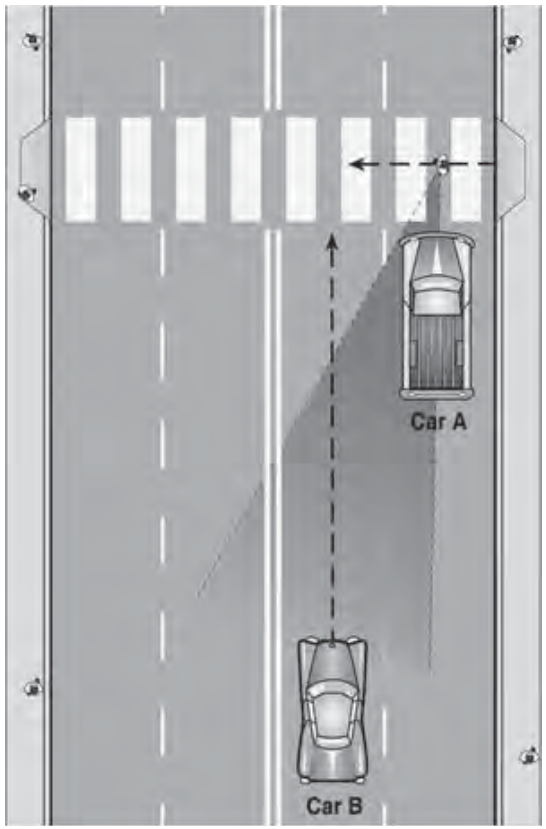
19 - 47%

CRASH REDUCTION

Source: Road Diet Brochure (FHWA)

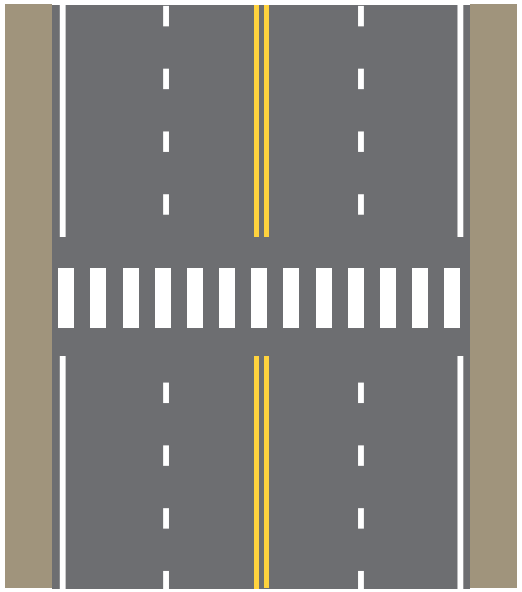
Pedestrian Safety

Multi-Threat Crossings

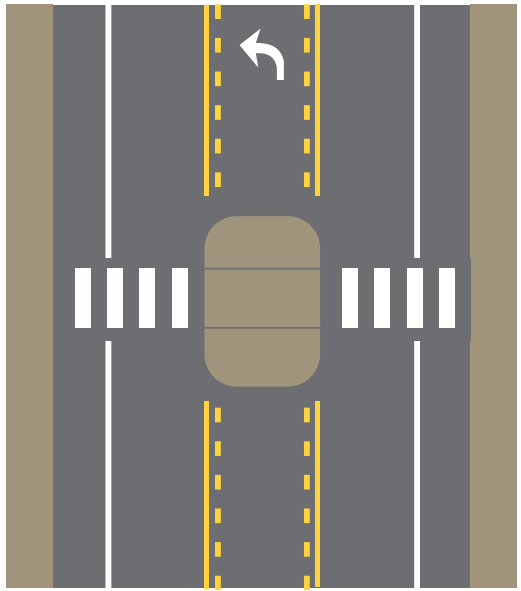


Opportunity for Two-Stage Crossing

4 Lanes



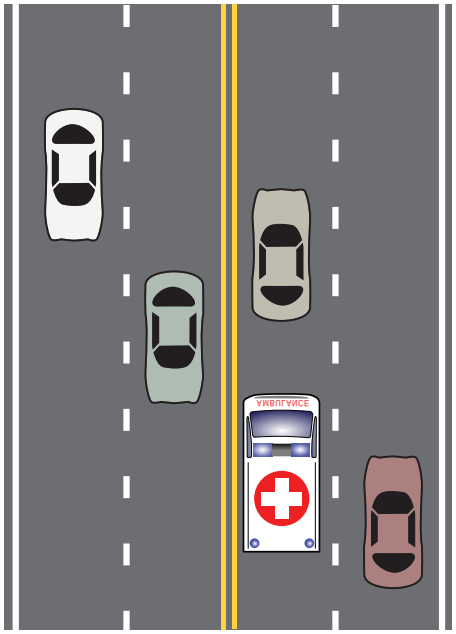
3 Lanes

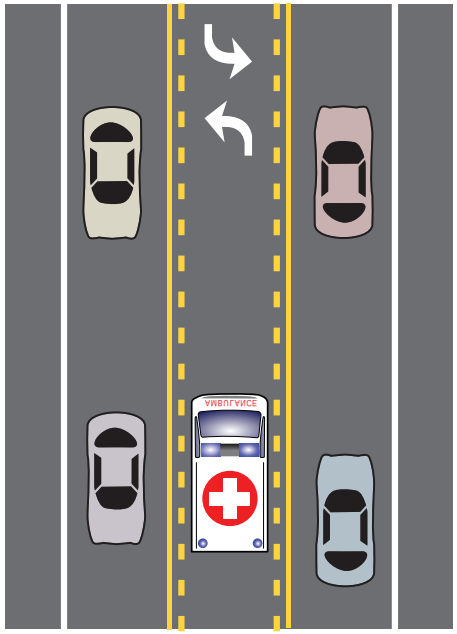


Source: Safe Routes to School

http://guide.saferoutesinfo.org/engineering/marked_crosswalks.cfm

Emergency Response





"Emergency response is not an issue, as I previously believed it would be. I definitely had a change of opinion."

Reed Merinuk
Ret. Chief of Police, Woodbury, NJ

- **Road Diets are being implemented nationally:**
  - » Iowa DOT has completed over 35 Road Diet projects and has not received any complaints from EMS, police/fire departments, or hospitals; emergency responders say their response times have actually improved

Source: FHWA Office of Safety

Road Diet Examples in New Jersey

West Ave (CR 619)

Ocean City, Cape May County

- Converted between 2002-2006
- Average Daily Traffic (ADT) = **11,651 vehicles** (August 2013 at 14th Street)

Broad Street (NJ 45)

Woodbury, Gloucester County

- Converted in 2012
- Average Daily Traffic (ADT) = **23,386 vehicles** (Pre-conversion, 2010)

Appendix E - Municipal Code Review

Municipal Code Review

As part of the Ventnor-Margate Bicycle & Pedestrian Plan, Urban Engineers, Inc. (Urban) reviewed the sections of Ventnor and Margate's municipal codes that govern walking, biking, and street design (as it affects walking/biking). Recommended modifications are listed below by section.

Ventnor Municipal Code

Sections Reviewed:

- Chapter 75: Bicycles, Roller Skates, and Skateboards
- Chapter 102-118.4: Landscaping Requirements
- Chapter 102-138: Streets, Curbs, and Sidewalks
- Chapter 197: Streets and Sidewalks

Recommendations:

§75-2. Registration & Inspections
Remove recommendation that bicycles owned by Ventnor residents must be inspected and registered.

§75-9. Time & Place Restrictions
Expand bicycle hours of operation to include night hours for all periods except Saturdays and Sundays during the peak season.

§75-11. Operation on Roadways & Paths
Remove the requirement that if a bike path is located adjacent to the road, bicycles must use the path and not the road. Also remove requirement for people riding bikes to ride in single file.

§102-118.4. Landscaping Requirements
Increase the minimum width for the "governor's strip" (buffer between sidewalk and curbline) from 3 feet to 5 feet to provide adequate room for tree plantings, which provide many benefits to walking including shade, improved aesthetics, and air/noise pollution reduction

§197-9. Obstructions by Goods or Merchandise
Add statement that bike racks can also be located in the public easement sidewalk area, subject to certain limitations. For example: "bicycle parking shall be located so as not to block the pedestrian path on a sidewalk or within a site. A minimum of five feet of unobstructed passage is required on public sidewalks. All bike racks shall be located at least 24 inches in all directions from a wall, door, landscaping, or other obstruction that would render use of the racks difficult or impractical."

§197-22. Sidewalk Specifications
Supplement minimum sidewalk width requirement with a greater minimum width (8-10 feet) in business districts

Margate Municipal Code

Sections Reviewed:

- Chapter 79: Bicycles
- Chapter 175, Article IV: Development Requirements
- Chapter 242: Streets and Sidewalks
- Chapter 257: Vehicles and Traffic

Recommendations:

§79-1. Registration & Inspections
Remove recommendation that bicycles owned by Margate residents must be inspected and registered.

§257-32.1. Bicycle Lanes
Bicycle lanes are legally established on Atlantic Avenue with a 5' width – increase width to 7' to accommodate a 2' buffer between bicycle lane and parking lane.

VENTNOR – MARGATE
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