November 1, 2024

Safe Streets & Roads Program Action Plan

Cape Island

City of Cape May, New Jersey

West Cape May

Borough of Cape May Point

A Place to Remember, Lower Township, N.J.

Prepared by the City of Cape May in cooperation with West Cape May, Cape May Point, and Lower Township

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Chapter 1. Introduction

1.1. Background

Cape Island encompasses the land mass south of the Cape May Canal and includes the municipalities of the City of Cape May, the Boroughs of West Cape May and Cape May Point, as well as a portion of Lower Township. Nearly all roads on Cape Island are under municipal or county jurisdiction.

According to the U.S. Census Bureau's American Community Survey 2017-2021, Cape Island's year-round resident population in 2021 was 4,765; however, during the summer months the population increases substantially. The Cape May County Comprehensive Plan cites a 2011 study prepared by the county that indicated that the summer population was over eight times greater than the year-round population.[1] No studies have been performed for Cape Island itself, but the County's findings provide an indicator of the order of magnitude in population growth that Cape Island likely sees during the summer months. Roadway safety issues are compounded as vacationers descend on the island – many are unfamiliar with speed limits and travel routes, leading to confusion and increased risk of crashes. Visitors and residents often walk and bike on streets and roads that are not the safest; cross streets in undesignated locations; do not wear helmets; or use lights or reflective clothing at night. Twenty-nine percent (29%) of Cape Island's full-time resident population are age 65 or over. Older populations generally have longer reaction times, slower walking speeds, and vision impairments, particularly at night, than those who are younger. While Cape Island faces some unique safety challenges, many are common to the rest of the state and the nation.

All road users who live, work, and play on Cape Island are entitled to safe travel on its roads, sidewalks, and trails to get to and from their desired destinations. Safety is a shared responsibility of government officials, planners and engineers, law enforcement, emergency medical services, as well as the users of the transportation network. This action plan uses both data and stakeholder input to identify priority improvements as well as other strategies to improve the behaviors of drivers, riders, and pedestrians. Law enforcement and infrastructure improvements alone cannot do it alone. As users, we must share in the responsibility to make our roads safe.

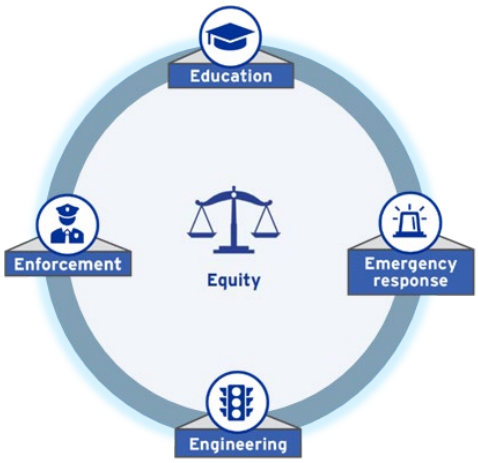


Figure 1-1: Five "Es" to consider when addressing safety

[1] Cape May County Comprehensive Plan, Adopted January 20, 2022

1.2. What is a Safe Streets & Roads Program Action Plan?

Figure 1-2: Local Road Safety Plan Results

Action Plans such as the Cape Island Safe Streets & Roads Program Action Plan, herein referred to as the Cape Island Action Plan (CIAP), are commonly referred to as Local Road Safety Plans (LRSP). LRSPs are strategic plans that identify and prioritize strategies to improve safety on local roads. The LRSP development process is tailored to address local issues and needs through continuous stakeholder involvement. This process ultimately results in a prioritized list of strategies and improvements that can be implemented to reduce fatalities and serious injuries on local roads.

LRSPs are locally coordinated and owned. Stakeholder involvement and collaboration is critical to LRSP development and implementation. From the onset, stakeholders representing the 4E's: Engineering, Education, EMS/Emergency responders, and Enforcement will be involved. Throughout plan development there was consideration of an overarching fifth "E," Equity, in all work and activities. This means making efforts to include voices of those representing underserved populations and considering strategies that can improve safety in underserved communities. This effort should continue as the plan is implemented.

Why prepare the plan?

Over 60% of all fatal and serious injury crashes in New Jersey occur on local roads. Implementation of LRSPs in other states resulted in improved safety for all road users and were adopted as a proven safety countermeasure by the Federal Highway Administration (FHWA). See Figure 1-2. Moreover, LRSPs created funding opportunities for municipalities and counties by aligning safety improvement actions with federal programs such as the Highway Safety Improvement Program (HSIP) and the $5B Safe Streets and Roads for All Program (SS4A).

The development and implementation of the Cape Island Action Plan is a collaborative effort of municipal governments and other safety stakeholders to prevent these unnecessary tragedies. Figure 1-3 provides a history of fatal and serious injury crashes on Cape Island. Note that the most recent year's data available at time of plan development was 2021.

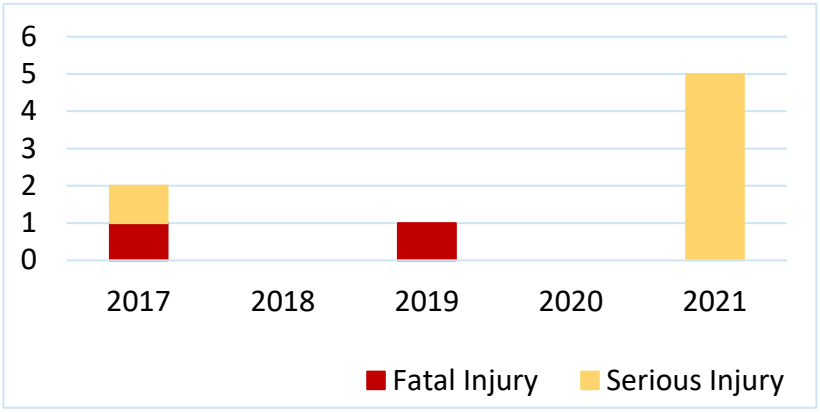


Figure 1-3: Cape Island Fatal and Serious Injury Crash History

1.3. CIAP Fatal and Serious Injury Crash Goal

Cape Island's goal is to reduce fatal and suspected serious injury crashes to zero by 2040. Figure 1-4 illustrates the trend in fatal crashes based on a five-year rolling average. Fatal crashes are trending in desired direction; however, they have not reached zero. Resolutions of commitment from officials of the City of Cape May, West Cape May, Cape May Point, and Lower Township are provided in Appendix A.

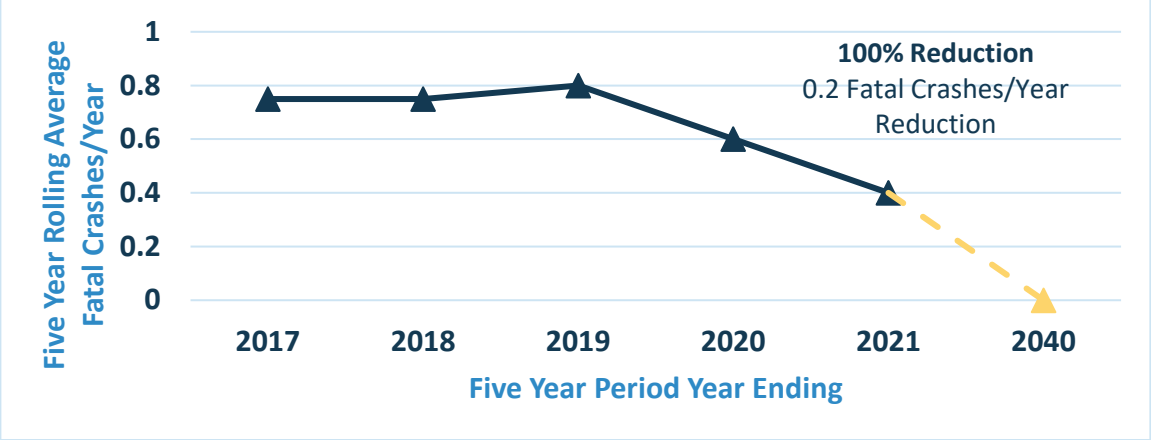


Figure 1-4: Cape Island Action Plan Fatal Crash Goal

1.4. Safe System Approach

The CIAP was developed following the Safe System Approach (SSA) to roadway safety[2]. This holistic approach has been adopted by the USDOT and widely across the transportation community as an effective way to address and mitigate risks in our transportation system. SSA focuses on both human mistakes and human vulnerability. Figure 1-5 illustrates the six principles of the SSA approach on the outside of the wheel and the five objectives on the inside of the wheel.

Figure 1-5: Safe System Approach Principles and Objectives

A Safe System cannot be achieved without all five elements working in synergy. Following the SSA, weaknesses in one element may be compensated for with solutions in other areas. A true systems approach involves optimizing across all the elements to create layers of protection against harm on the roads. Figure 1-6, the Swiss Cheese Model of redundancy, illustrates how the SSA provides layers of protection to safeguard road users.

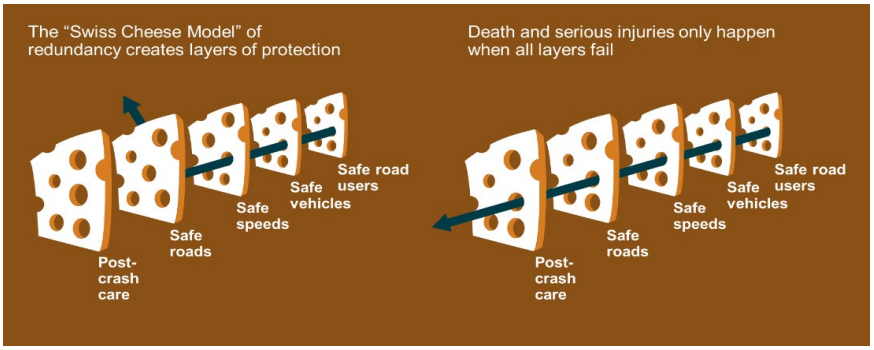


***Figure 1-6: Swiss Cheese Model of Safety Redundancy** Source: Washington Traffic Safety Commission*

[2] https://www.transportation.gov/NRSS/SafeSystem

1.5. Compliance with USDOT Safe Streets and Roads for All

Under the federal Infrastructure Investment and Jobs Act, Congress established the competitive grant program, Safe Streets and Roads for All (SS4A) to provide funding for implementation of safety-focused infrastructure projects. To be eligible to apply for funds, applicants must have a qualified action plan in place. This CIAP will meet all requirements of a USDOT SS4A action plan. Municipalities participating in the development of the LRSP will be eligible to apply SS4A funding, using the CIAP as their designated action plan.

1.6. Plan Development Approach

The CIAP was developed over one year with input from stakeholders and followed Steps 1 through 5 shown in Figure 1-7. The following chapters in the plan provide more detail on each of these steps. Step 6, Evaluate and Update, relates to Plan Implementation and is discussed further in Chapter 7.

Figure 1-7: Local Road Safety Plan Development Process

1.7. Coordination with Other Plans

Counties and municipalities frequently develop strategic plans such as master plans, long-range transportation plans, or bicycle and pedestrian plans. An objective of the CIAP development process is to coordinate with existing plans, so its goals, objectives, and strategies do not conflict with the goals, objectives, and strategies of other strategic plans. The CIAP should strengthen the development of future strategic plans by ensuring consideration of safety for all road users.

1.8. Plan Oversight

The CIAP was developed under the guidance of a Steering Committee charged with advising on key elements of the plan including emphasis areas, selection and prioritization of infrastructure and behavioral strategies, as well as implementation. The Steering Committee was comprised of stakeholders including municipal government officials as well as citizen representatives. The Steering Committee included the City of Cape May's Bicycle and Pedestrian Advisory Committee as well as municipal government officials and citizen representatives from the City of Cape May, West Cape May, Cape May Point, and Lower Township. The Steering Committee members are listed in Appendix A.

The Project Team, composed of Cape May City's City Manager/Engineer, Deputy City Manager, and the consultant team, met with the Steering Committee four times during the plan development process to reach key decisions, collaborate on project approach, and review project progress and next steps.

Chapter 2. Stakeholder and Public Engagement

2.1. Focus Group Meeting

A virtual focus group meeting was held with representatives from Cape Island on July 30, 2024 to gather input on non-infrastructure strategies that should be prioritized. The focus group also provided an opportunity to provide input on locations of concern. The project team distributed flyers in advance around the community and posted the notice of the meeting on Cape May City's website. The focus group meeting had nine (9) participants. Participants were guided through a live polling exercise to respond to questions related to non-infrastructure priorities. The focus meeting's live poll results are provided in Appendix C.

2.2. Cape May City's National Night Out

The Project Team staffed a table at Cape May City's National Night Out on August 6, 2024, to provide an opportunity for the community to provide their input to the plan on non-infrastructure strategies and locations of concern. The Project Team prepared display boards explaining the plan and fact sheets with QR codes that would guide community members to a web-based poll similar to the poll used for the Focus Group Meeting. The most popular sentiments in the Focus Group poll and National Night Out survey are provided below in Figure 2-1. Numbers in () indicate the number of responses to the question.

Top Safety Issues (5)

- Biking and Walking

Top Audiences (9)

- Visitors/Tourists
- Youth

Best Way to reach them (9)

- Social media
- Vehicle rentals/tour operators

Best way to improve safety of elementary/middle school students (9)

- School competition/recognition
- Police education
- Walking school buses, bike trains

Best way to reach high school students (9)

- Videos/Discussions in Schools
- Guest Speakers
- Police Education

Figure 2-1: Popular responses from Focus Group Live Poll and National Night Out

The project team also gathered concerns on specific roadways and intersections from the public as part of the Focus Group Meeting and at the National Night Out event. Locations of concern are summarized in Chapter 4.

2.3. Public Meeting

An in-person public information center meeting was held at Cape May City Hall on Oct 17th from 5:00PM to 7:00PM to allow community members, business owners, and visitors to learn about the plan and provide comments.

The project team provided an overview of the plan, answered questions, and received comments. Comments received are noted in Appendix C.

Figure 2-2: Public Meeting October 17, 2024

2.4. Engaging Underserved Communities

Utilizing the demographic analysis of Cape Island that is described in Chapter 3, the project team identified those aged 65 and older as a primary underserved population across the island. A small Spanish speaking population exists in the City of Cape May, estimated at less than 50 persons.

The Steering Committee includes significant representation of the 65+ age group. The project team made efforts to gather input from the ESL population by providing notifications/fact sheets in Spanish languages for the Focus Group meeting as well as the Public Meeting.

2.5. Elected Officials Engagement

The project team presented the plan to the municipal councils of each of the four municipalities for endorsement.

2.6. Stakeholder Interests

The project team gathered concerns from the City of Cape May Bicycle and Pedestrian Advisory Committee (BAPAC), other Steering Committee members, as well as from the public during the Focus Group Meeting, National Night Out event, and the Public Meeting. Locations of concern are identified below.

City of Cape May Bicycle and Pedestrian Advisory Committee (BAPAC) Recommendations

The BAPAC provided a list of recommended improvements to Cape May City Council in 2023. The BAPAC list is provided in Appendix C. The following are improvement recommendations from BAPAC that were not already addressed, with the exception of the request for bicycle sharrows at various locations around the City.

Location	Recommended Improvement
Ocean Street	Reconfiguration of lanes at the intersection with Lafayette Street
Hughes Street	Provide a contra-flow bicycle lane
Jackson Street	Provide a one-way bicycle lane from the mall to Beach Avenue
Perry Street	Crosswalks at Congress Street
Benton Avenue	Crosswalks at Sewell and Howard Street

Locations Identified by Other Stakeholders

Steering Committee members, Focus Group meeting attendees, Cape May National Night Out attendees, and Public Meeting attendees noted the following locations of concern.

Lighthouse Avenue and Seagrove Avenue in Cape May Point Broadway from the West Cape May/Lower Township border to Central Avenue
Broadway/Seashore Road
Lafayette Street
Perry Street/Park Avenue Intersection
Sunset Boulevard
Providing safe travel routes for walkers and bicyclists from West Cape May to the city downtown and beaches

Chapter 3. Existing Conditions, Data Collection and Analysis

3.1. Crash Data / Analysis

The project team identified crash trends, predominant crash attributes, and locations with a history of crashes. The analysis helped the Steering Committee select plan emphasis areas and identify infrastructure priorities.

The crash data source for the analysis was the New Jersey Department of Transportation (NJDOT) crash records database, which contains detailed information on all crashes obtained through the police crash investigation report form (NJTR-1). Figure 3-1 illustrates FSI crash trends on Cape Island over the five-year period. Note that 2021 was the most recent data available at the time of plan development.

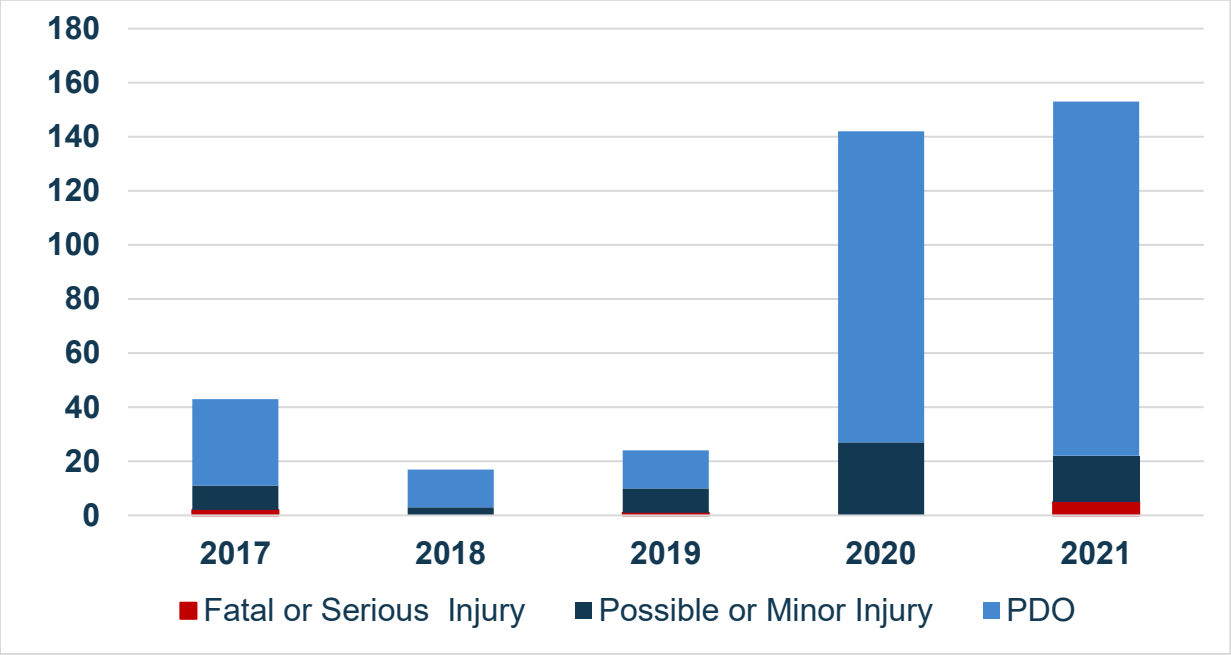


Figure 3-1: Crash Trends on Cape Island. PDO = Property Damage Only

Beginning in 2019, New Jersey updated the police crash report to be consistent with the federally required injury classifications (Killed, Suspected Serious Injury, Suspected Minor Injury, Possible Injury, and No Apparent Injury). The spike in the number of serious injuries from 2019 is a result of this change, as injuries not previously attributed to the serious injury classification are now included in this number. The crash trends demonstrate the need to strengthen efforts to reduce FSI crashes through the efforts of this plan.

Crash Attributes

The CIAP uses crash attributes to focus the plan on areas that would have the most impact in reducing fatalities and serious injuries. Crash attributes include driver/operator condition or behavior, crash locations, involved parties/vehicles (pedestrian, bicyclist, motor vehicle), and road conditions. All New Jersey police forces use a standard list of crash attributes when reporting crashes on the NJTR-1 form. Each

crash has multiple crash attributes. Data from all reported crashes in the state is aggregated statewide by NJDOT for high level roadway safety planning or analysis of specific locations by the state, counties, municipalities, and other organizations that work to improve road safety, such as the South Jersey Transportation Planning Organization.

The crash attributes identified in the New Jersey 2020 Strategic Highway Safety Plan (SHSP) provided a starting point for selection of the CIAP emphasis areas. Cape Island crashes were analyzed to determine their alignment with the SHSP attributes. Figure 3-2 depicts how Cape Island's crashes align with the SHSP crash attributes. Note that a crash may have multiple crash attributes.

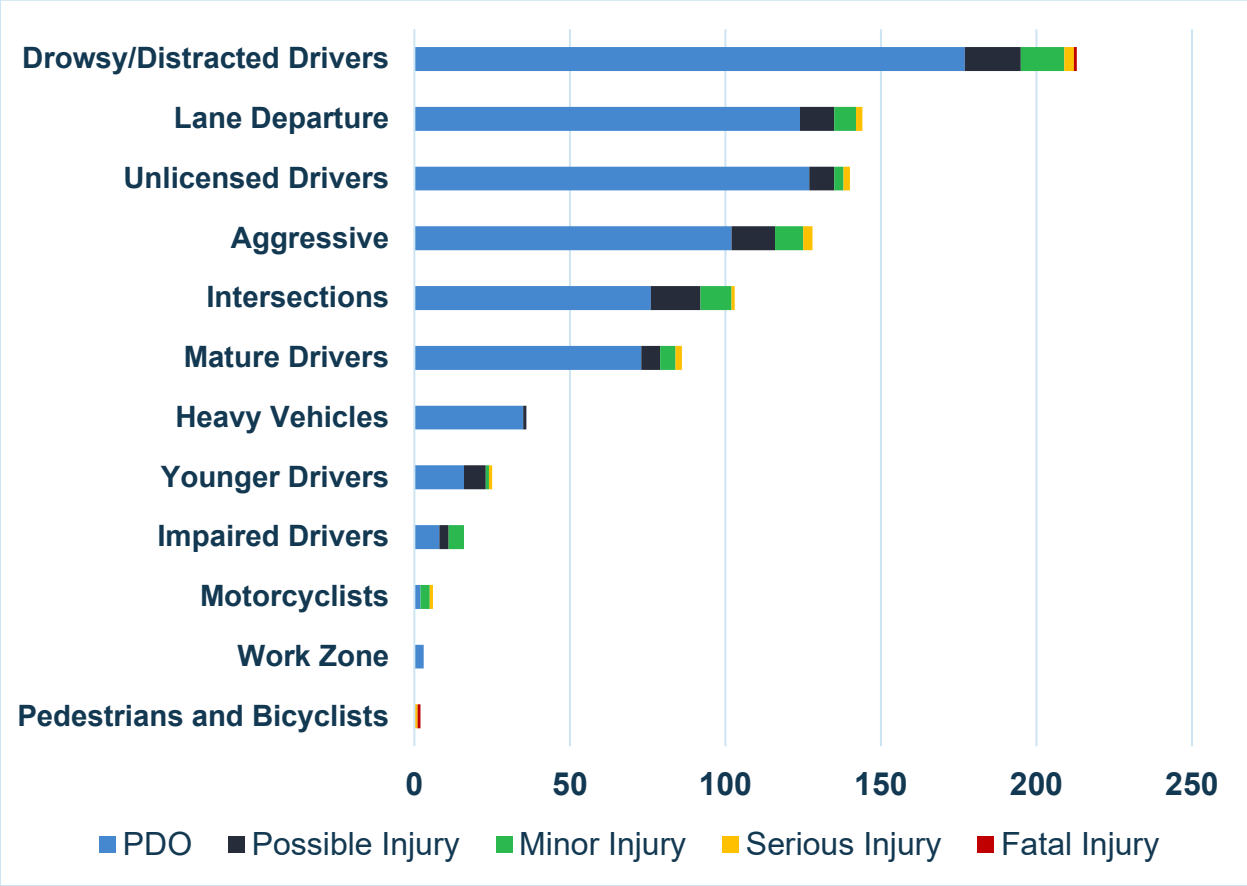


Figure 3-2: Crash attributes for Cape Island crashes 2017-2021. PDO = Property Damage Only

3.2. Demographic Analysis

The project team used USEPA's EJ Screen Tool to assess the demographics of Cape Island. The EJ Screen Tool uses data from the U.S. Census Bureau's American Community Survey 2017-2021. Cape Island's full-time resident population was 4,765 at the time of the survey. Cape May County's Comprehensive Plan, adopted in January 2022, notes that a seasonal population survey conducted in 2011 found that the seasonal population of the county in its entirety was more than eight times than the resident population. Seasonal population surveys for Cape Island were not available. Based on the full-time resident population only, the proportion of the population each underserved population category represents is provided in Table 3-1 below. Table 3-1 also provides the percentile ranking in comparison to all census blocks in the U.S. What stands out about Cape Island is that 29% of Cape Island's resident population is 65 or older,

ranking it in the 87th percentile nationally. This means that Cape Island's 29% portion of the population aged 65+ is larger, as a percentage of the of population, than 87% of all other census block groups in the U.S.

Table 3-1: Cape Island Underserved Community Population Percentage and Percentile amongst other Census Blocks in the U.S.

Full-Time Resident Underserved Community	Cape Island Population Percentage	Percentile ranking in the U.S.
Low Income	22%	41st
People of color	24%	43rd
65 or older	29%	87th
Unemployed	4%	57th
Home ownership	70%	Unavailable
Less than high school education	4%	27th
Persons with disabilities	10%	Unavailable
Limited English-speaking households	1%	57th

Source: U.S. Census Bureau American Community Survey 2017-2021

The project also assessed underserved populations at the census block level. Cape Island is comprised of eight (8) census blocks. Appendix D includes details of the analysis at the census block level. Four of the eight census blocks have populations comprised of over 50% aged 65+. Six of the eight census blocks exceed the 87th percentile for proportion of the population aged 65+. Low-income, people of color, unemployed, less than high school education, and limited English-speaking households were also identified as groups that should be considered in plan development and project implementation. It should be noted that the census block with the largest population includes sizeable low income and people of color populations, 38% and 65% respectively, and encompasses the U.S. Coast Guard Training Facility. A portion of the roads in this census block are under the jurisdiction of the federal government. The plan's ability to address federally owned streets is limited.

The assessment resulted in the following actions by the project team:

1. Make efforts to engage the following groups during plan development
   - Age 65+
   - Low Income
   - People of color
   - Less than high school educated
   - Limited English-speaking residents
2. Consider in countermeasure implementation
   - Age 65+

- Limited English-speaking populations (primarily Spanish speaking)

Efforts to reach these communities are identified in Chapter 2, Stakeholder and Public Engagement.

3.3. Bicycle and Pedestrian Network Gap Assessment

The Cape May County Planning Department maintains an inventory of sidewalk and on-road bicycle facilities in the county. Using this information, the project team identified gaps in both the sidewalk network and the on-road bicycle network.

The project team identified planned on-road projects that will help to close sidewalk and network gaps and identified gaps in the network that will remain after these projects are completed. Off-road bicycle facilities were not identified by the project team; however, the Steering Committee raised the importance of providing off-road facilities where possible for safe bicycle travel to and from Cape Island's many attractions. Figures 3-3 and 3-4 depict gaps in the existing sidewalk and on-road bicycle facility networks.

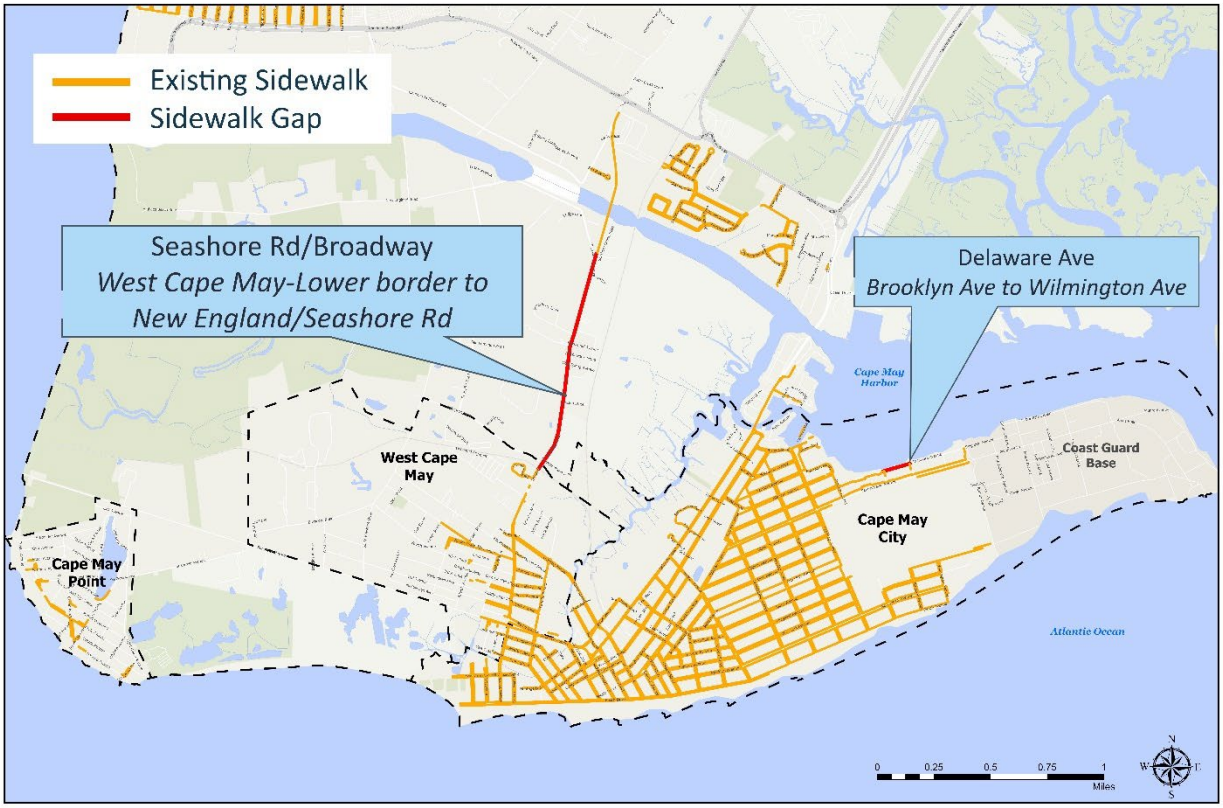


Figure 3-3: Sidewalk Network Gaps

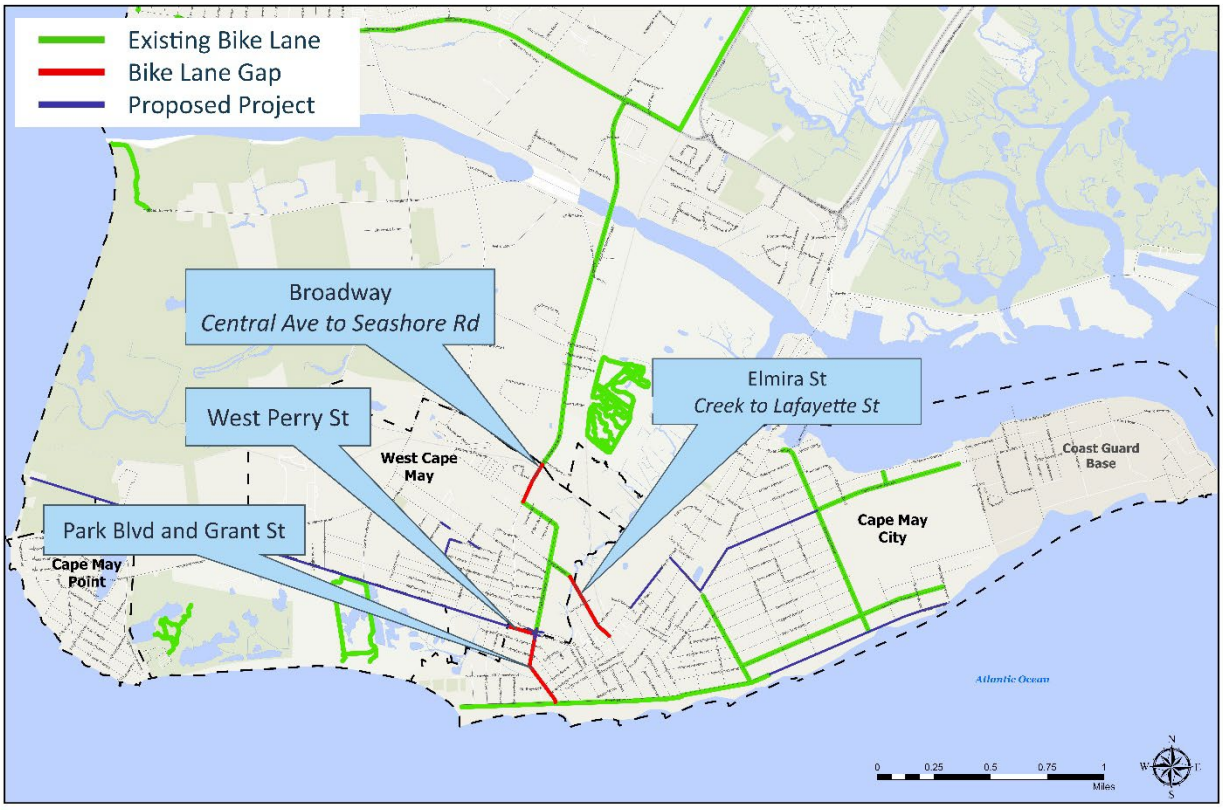


Figure 3-4: On-Road Bicycle Facility Network Gaps

3.4. Currently Planned Projects

The project team identified projects programmed for implementation by the municipalities or Cape May County over the next several years. These projects are:

- Safety Improvements, including pedestrian and bicycle facilities on Sunset Boulevard from Park Boulevard to Diamond Beach in West Cape May, Lower Township, and Cape May Point
- Pedestrian and Bicycle Improvements on Lafayette Street from Saint John's Street to north of Queen Street in the City of Cape May
- Bicycle improvements on Madison Avenue from Columbia Avenue to Lafayette Street in Cape May City
- Bicycle improvements on Michigan Avenue from Madison Avenue to Pennsylvania Avenue in Cape May City
- Bicycle improvements on Pennsylvania Avenue from Michigan Avenue to Pittsburgh Avenue in Cape May City
- Sidewalk and bicycle improvements on Central Avenue and Park Boulevard in West Cape May

Chapter 4. Safety Emphasis Areas and Project Selection

4.1. Safety Emphasis Areas

Based on a review of the crash attributes associated with Cape Island's crash trends, the Steering Committee selected the four (4) emphasis areas shown in Figure 4-1. These emphasis areas offer the greatest opportunity to achieve significant reductions in traffic-related fatal and serious injury crashes and meet the safety goal of the CIAP. Each emphasis areas is described below. Data analysis and strategies were developed with a focus on these areas.

Lane Departure

Lane Departure crashes include non-intersection crashes involving a vehicle (or vehicles) unintentionally leaving the travel lane (to the left or right), crossing the median/centerline, hitting a fixed object, encroaching into opposing lanes resulting in crashes with an oncoming vehicle, and collisions with a parked vehicle.

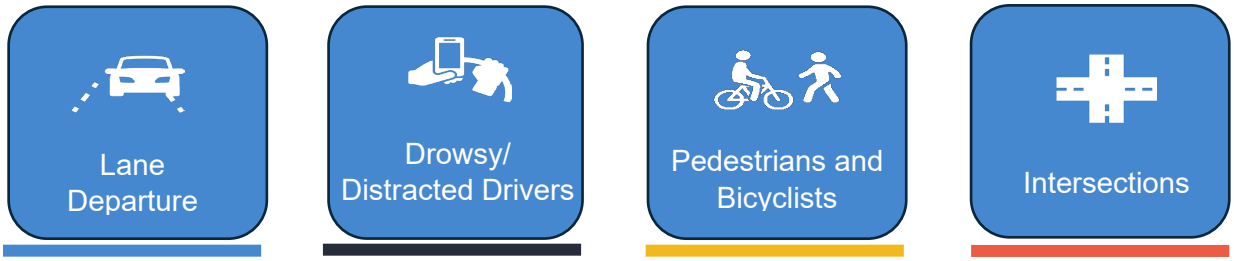


Figure 4-1: CIAP Emphasis Areas

Drowsy/Distracted Drivers

Drowsy/distracted driving is attributed to crashes where driver inattention, distraction, fatigue, or falling asleep is a contributing circumstance. Driving is a complex task and requires attention to the roadway and visual environment. Inability to provide complete attention to the driving task can result in reduced safety for drivers as well as vulnerable roadway users.

Pedestrians and Bicyclists

Pedestrian and bicyclist crashes involve a person reported as a pedestrian or bicyclist. According to the United States Census Bureau, approximately 4% of population in New Jersey choose walking and/or biking as their mode of transportation. This percentage is higher for urban areas. Pedestrians and bicyclists are the most vulnerable roadway users and are more susceptible to suffering serious injuries and fatalities when involved in a crash.

Intersections

Intersections create points of conflict due to the various types of maneuvers (turning and crossing) as well as the various types of users (vehicles, pedestrians, bicycles). Because of these factors, greater demand is placed on road users when making decisions. Pedestrians and bicyclists are at greater risk at these locations.

4.2. Network Screening

Traditionally, decision-makers identify and prioritize segments and sites with a history of crashes for improvement. This methodology is called the hot spot approach. While this approach is a reactive technique after severe crashes have occurred, it is a valid approach and complements the proactive approach of Systemic Analysis. Hot Spot Analysis was conducted as part of this plan.

Hot spot analysis is conducted via network screening. FHWA defines network screening as a method that objectively considers crash history, roadway factors, and traffic characteristics that may contribute to future crashes and helps agencies identify and prioritize locations for potential safety investment. The network screening process reviews transportation networks to rank specific sites where crash-frequency reduction methods can be implemented. NJDOT develops Network Screening Lists (NSL) for road segments (corridors) as well as intersections on all roads statewide. They also prepare separate lists that focus on pedestrian and bicyclist crashes. The four lists were used for the analysis and are summarized below.

Table 4-1: Hot Spot Network Screening Lists

Report Type	List	Crash Types
Corridor	Corridor	All crashes
	Ped-Bike Corridor	Pedestrian and bicyclist crashes
Intersection	Intersection	All crashes
	Ped-Bike Intersection	Pedestrian and bicyclist crashes

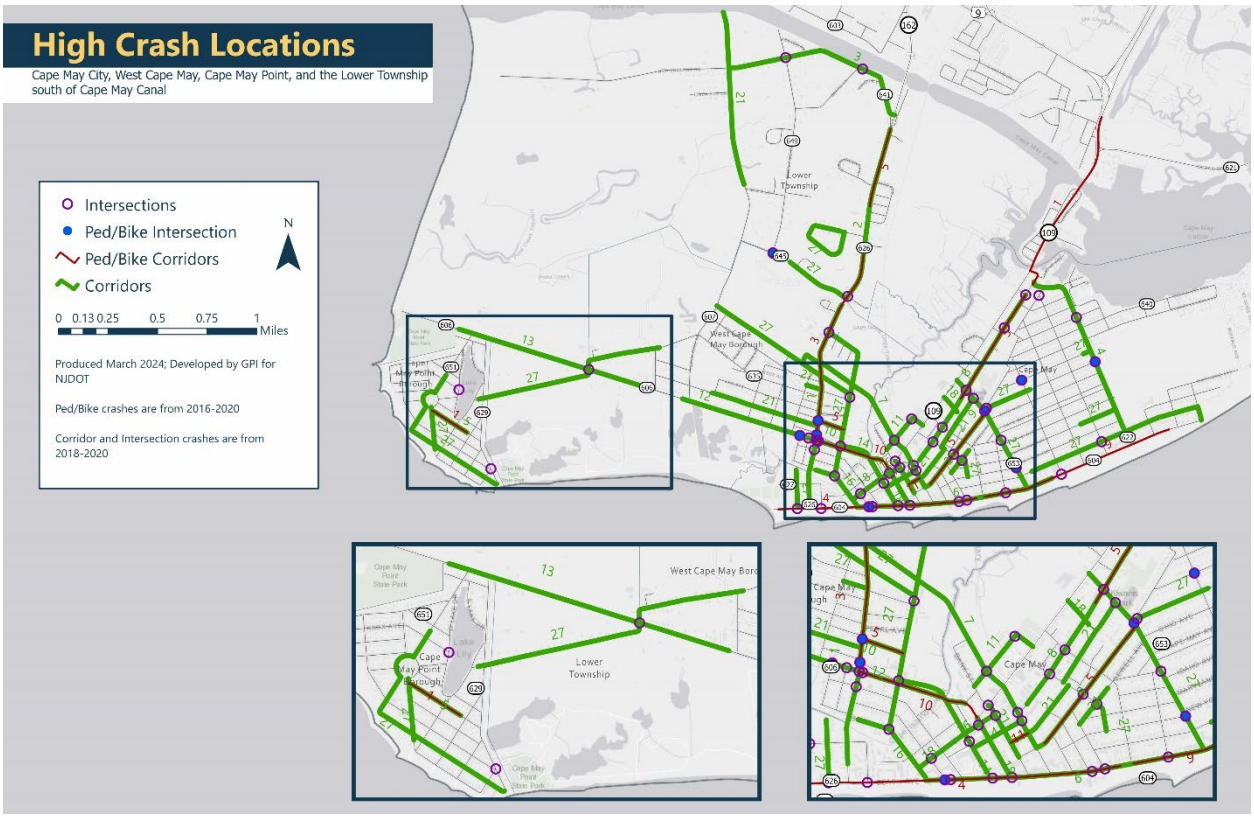


Figure 4-2: High Crash Locations (Hot Spots)

4.3. Systemic Analysis

A system-based approach looks beyond crashes at specific locations and instead, evaluates crash risk across an entire roadway system. The goal of the systemic process is to proactively treat numerous locations with physical characteristics similar to locations with a crash history. The Systemic analysis identifies predominant crash types and roadway characteristics associated with the same. Low-cost proven safety countermeasures are selected for widespread implementation across the targeted locations. This proactive technique complements traditional, reactive, hot-spot analysis and supports the Safe System principle that safety is proactive.

The systemic analysis was conducted on segments for the lane departure and drowsy/distracted emphasis areas and intersecting points for the intersection and pedestrian/bicyclist emphasis areas. All roads were evaluated on Cape Island. The following focus crash types, representing the greatest number of crashes across the system, for each emphasis area are noted below.

Table 4-2: Systemic Analysis Focus Crash Types and Facilities

Emphasis Area	Focus Crash Types	Focus Facilities
Lane Departure	Fixed Object, Opposite Direction (sideswipe), Struck Parked Vehicle	All municipal and county roads
Drowsy/ Distracted		
Intersection	Right Angle, Pedestrian, Pedacycle	All municipal and county roads
Pedestrian/Bicyclist		

A crash tree diagram tool provided via FHWA was used to assess the statistical relationship between combinations of roadway segment or intersection characteristics and crash history. The crash tree can be structured with up to five parameters based on available information. The resulting systemic analysis crash tree identifies crash percentages for segments or intersections with varying combinations of physical characteristics. Segment and intersection configurations associated with the highest probability of crashes are selected as the focus facilities for systemic treatment improvements. Of note, physical characteristics of a roadway segment or intersection are not necessarily crash contributors. The following roadway attributes were identified from the systemic analysis.

Table 4-3: Selected Road Segment and Intersection Types for Systemic Treatment

Emphasis Area	Roadway Attributes
Lane Departure	Local roads, speeds 25 mph or less, straight alignment
Drowsy/ Distracted	
Intersection	Local Roads, stop controlled intersections
Pedestrian/Bicyclist	

Crash trees, parameters, and tables listing focus segments and focus intersections meeting the characteristics below are provided in Appendix B. Figure 4-3 shows the locations of recommended segments and intersections.

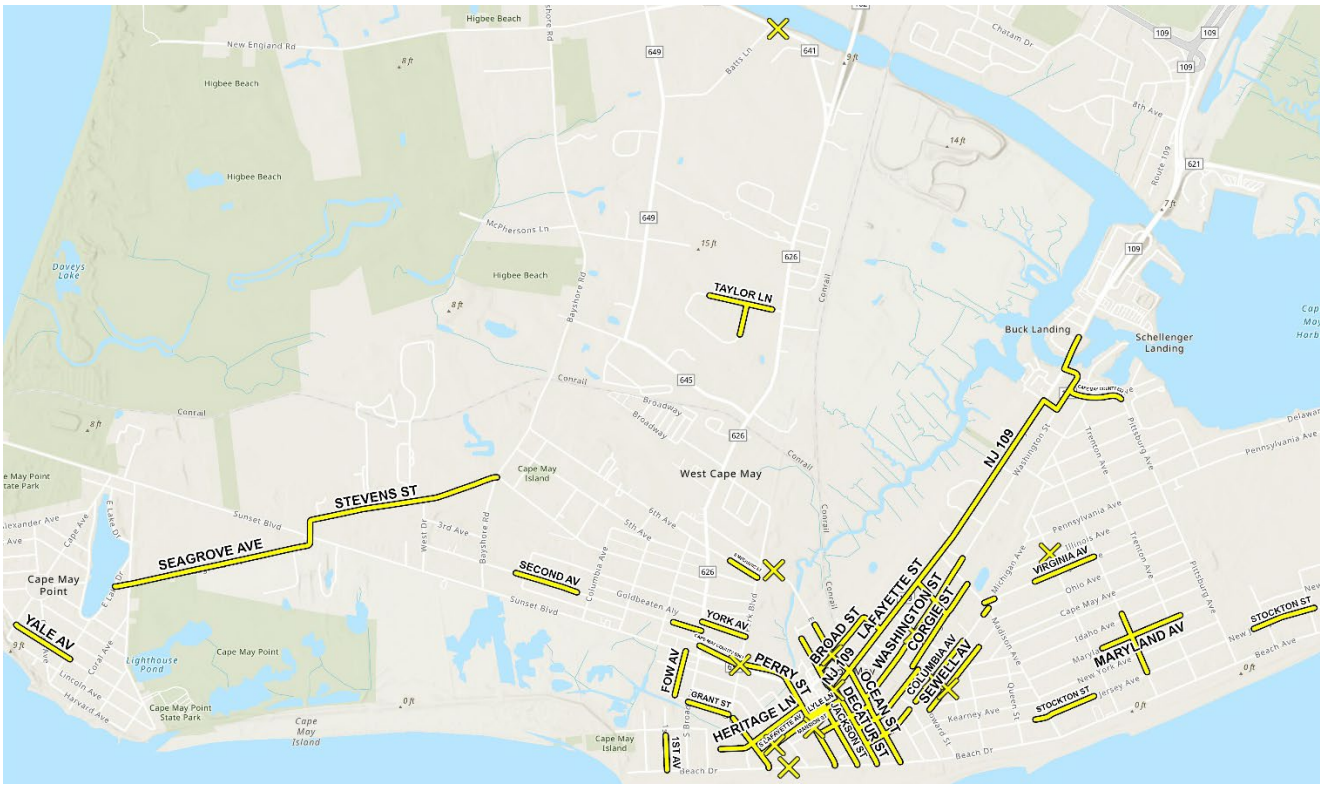


Figure 4-3: Systemic Treatment Candidate Locations

4.4. Project Selection Process

The project team used a four-step process to identify and prioritize projects. The process is identified in Figure 4-4 below. After the candidate hot spot and systemic treatment locations and were identified as described in Chapter 3, they were scored and ranked as noted below to create a priority set of locations. The project team then performed a geospatial analysis to identify overlap with recently or soon to be completed projects, bicycle and pedestrian facility gaps, and input from the steering committee and other stakeholders. Using the geospatial analysis, the project team also considered where priority locations could be combined create a unified project.

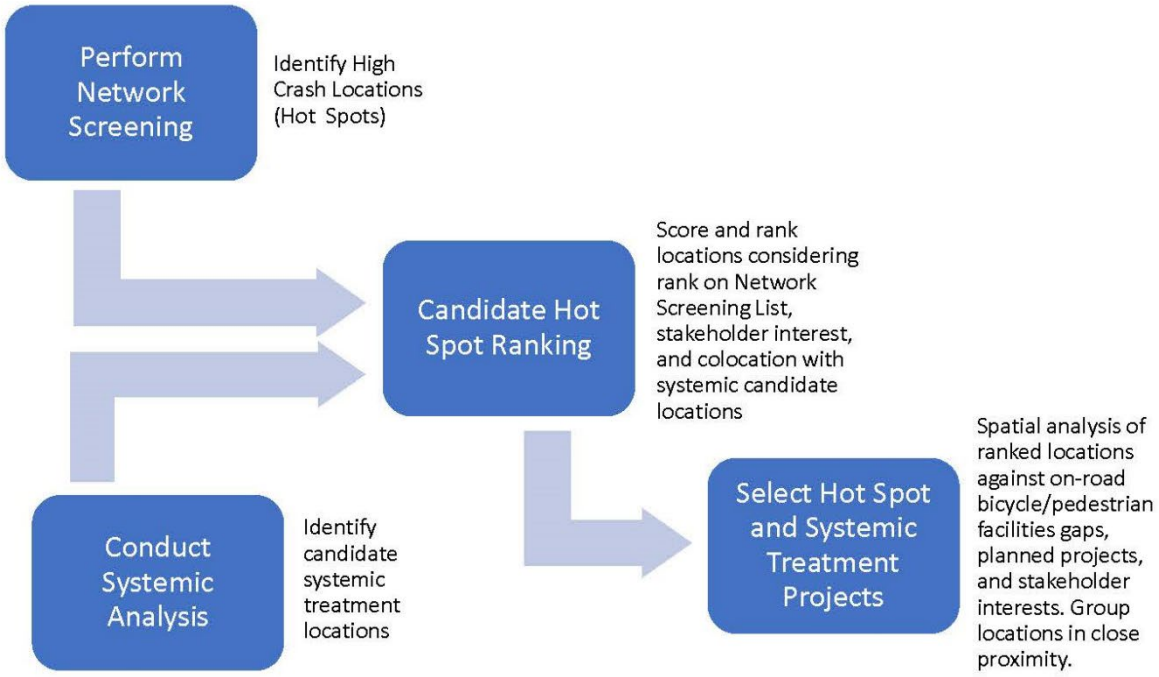


Figure 4-4: Project Selection Process

Candidate Hot Spot Location Ranking

The project team used a simple scoring process to further rank Network Screening List (NSL) locations. Locations that ranked in the top 10 on the NSLs received three (3) points. Locations ranking 11 through 20 received two (2) points. Locations ranking 21 through 50 received one (1) point. Locations ranking 51 or higher received 0.5 point. Locations received an additional point if they were identified in any stakeholder discussions, live polls or surveys. Locations also received an additional point if the location was concurrent with a systemic treatment location. Using this methodology a location could receive a maximum score of 4 points. Segment and intersection locations with a score of 4 are identified displayed on Figure 4-5.

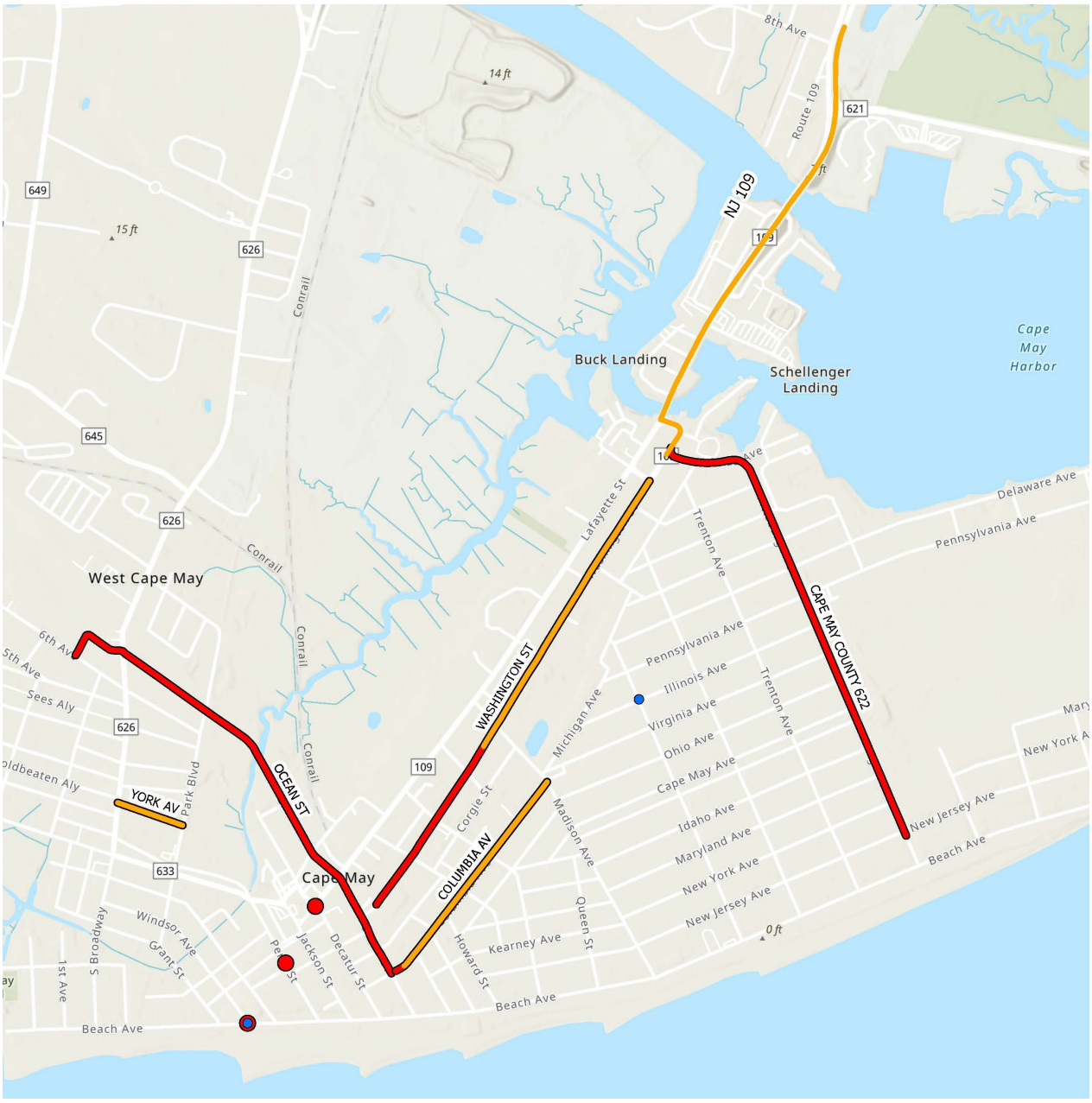


Figure 4-5: Segments and Intersections with a score of 4

Top ranking segments and intersection include:

Corridor/Intersection (all crashes)	Ped-Bike Corridor/Intersection
Ocean St/Elmira St/Leaming Avenue	Columbia Ave
Washington St	Washington St
County Route 622 (Pittsburgh Ave)	York Ave
Beach Ave & Windsor Ave	NJ 109
Perry St & Mansion St	Beach Ave & Windsor Ave
Lafayette St & Bank St/Decatur St	Philadelphia Ave & Illinois Ave

The full results of the scoring process are provided in Appendix B.

Initial Recommendations and Geospatial Analysis

The project team recommended three (3) hot spot and three (3) systemic projects using the spatial analysis to evaluate all factors and group locations to form logical projects. The project team's recommended projects were:

1. Intersection of Lafayette Street, Bank Street and Decatur Street in the City of Cape May
2. The corridor encompassing Ocean Street, Elmira Street, Leaming Avenue, Landis Avenue and Stewart Lane from Sixth Avenue to Columbia Avenue in the City of Cape May
3. Washington Street from Ocean Street to Sidney Avenue in the City of Cape May
4. Systemic Treatments on Lighthouse Avenue and Seagrove Avenue
5. Sidewalk/Bike Gap & Systemic Treatments on Seashore/Broadway (with County coordination)
6. Systemic Treatments on Lafayette Street (with County coordination)

The project team then mapped these locations as well as the locations identified by the Steering Committee, stakeholder input, sidewalk and bicycle facility gap analysis, and planned projects. Figure 4-6 displays how the results of the mapping exercise. This map was used as a tool for discussion with the Steering Committee to select projects.

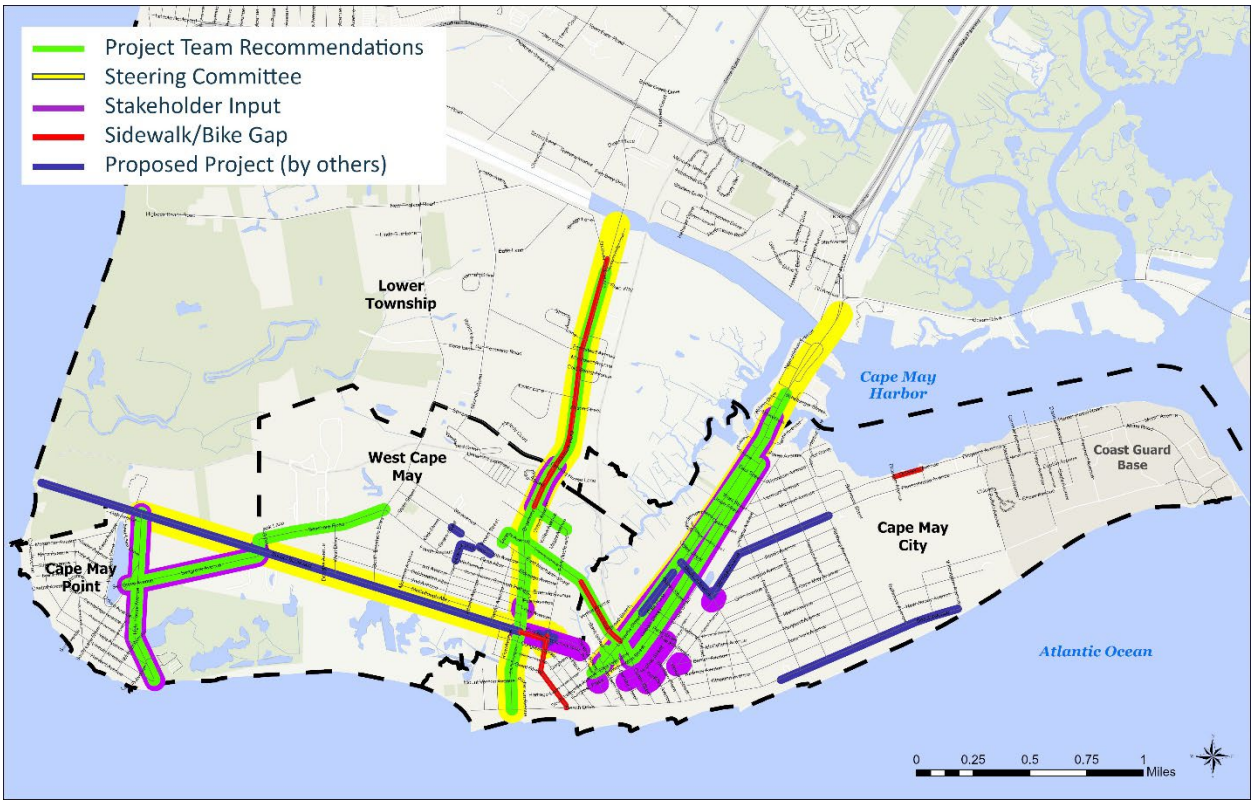


Figure 4-6: Project Team Recommendations Overlaid with All Input/Analysis

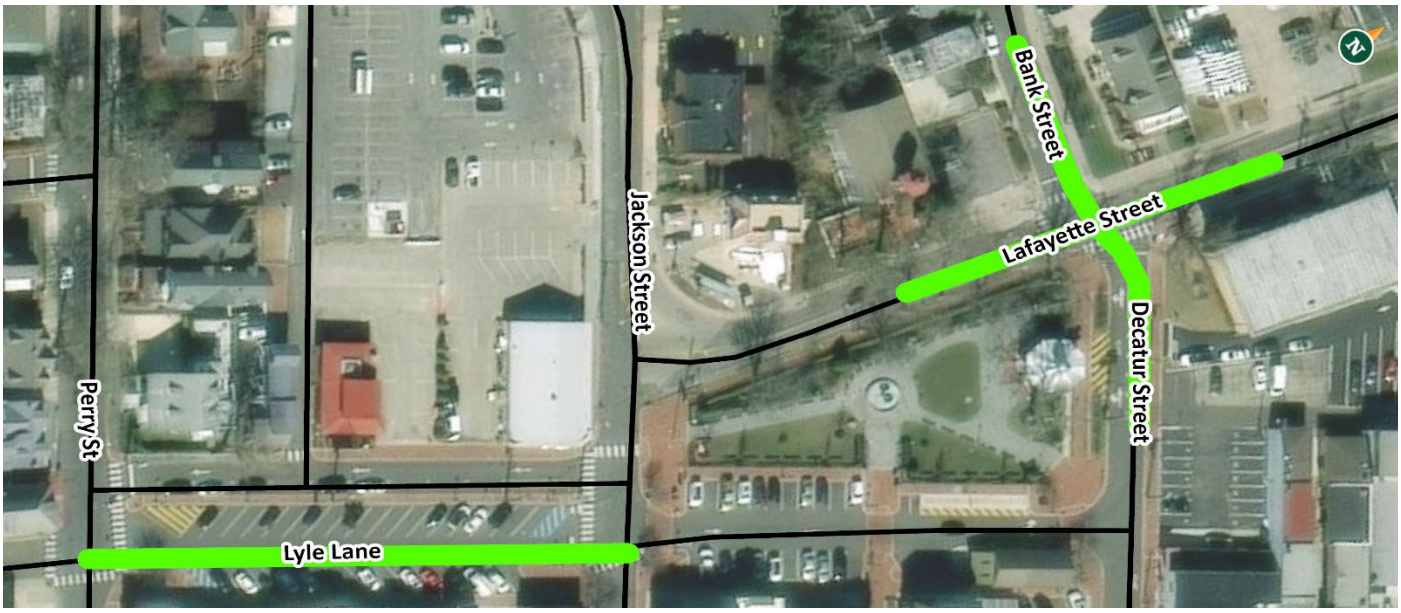
Chapter 5. Prioritized Infrastructure Projects

The project team facilitated discussions with the Steering Committee to select projects for inclusion in the plan based on the recommendations of the project team as identified in in Section 4.5, as well as consideration of stakeholder interests. The prioritized projects are identified in Table 5-1:

Table 5-1: Prioritized Infrastructure Projects

Proposed Project	Location	Estimated Construction Cost ($MM)	Deployment Target
Safety improvements at the intersection of Lafayette Street, Bank Street, Decatur Street and include Lyle Lane leading to Decatur Street	City of Cape May	$0.311	1-3 years
Safety improvements on Ocean Street, Elmira Street, Leaming Avenue, Landis Avenue and Stewart Lane extending from Sixth Avenue to Columbia Avenue	City of Cape May and West Cape May Borough	$0.655	1-3 years
Safety improvements on Washington Street from Ocean Street to Sidney Avenue	City of Cape May	$1.500	3-5 years
Systemic safety treatments on Lighthouse Avenue, Seagrove Avenue and Stevens Street extending from the beach to 4th Avenue	Cape May Point Borough and Lower Township	$0.313	1-3 years
Systemic treatments on Lafayette Street (CR633) in coordination with Cape May County	City of Cape May and Lower Township	$0.300	3-5 years
Sidewalk and bicycle facilities gap closures, where feasible, and systemic treatments on Seashore Road/Broadway from Seashore Bridge Road to Beach Avenue	West Cape May Borough, Lower Township, and City of Cape May	$0.721	1-3 years
Supplemental planning to update the 2016 Cape May Bicycle and Pedestrian plan focusing on how to best provide safe pedestrian and bicycle passage to and from Cape May's attractions considering on-and-off-road solutions	All municipalities	$0.200	1-2 years
Systemic treatments on straight road segments with a posted speed limit of 25 mph or less	All municipalities	$1.200	3-5 years
Systemic treatments at stop-controlled intersections	All municipalities	$1.400	1-3 years
Consideration of speed humps and speed tables on streets where practicable across all municipal jurisdictions	All municipalities	Humps: $0.002/location Tables: $0.008/location	1-5 years

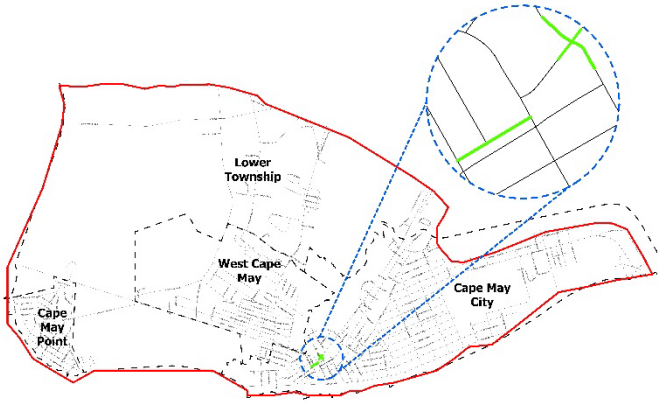
Summary descriptions of each proposed project are provided in the following pages. The summaries address any positive or negative impact on underserved communities as well as considerations that should be made during project development to account for underserved populations who may use the facility.



<u>Proposed Project:</u> Lafayette Street, Bank Street, Decatur Street, Lyle Lane

<u>Estimated Construction Cost:</u> $311,000

<u>Deployment Target:</u> 1-3 years



Decatur Street Intersection

Lafayette Street is classified as an urban minor arterial. Bank Street and Decatur Street are local roads. The speed limit ranges from 25-35 mph, decreasing in speed in denser areas, demarcated solely by paint markings. Lafayette Street runs east to west. Decatur Street runs north to south. It is a two-lane road with a left and right turn onto Lafayette Street. Bank Street runs north to south with a right turn onto Lafayette Street. Lyle Lane runs north to south.

Several critical issues were identified, notably narrow or no shoulders on Lafayette Street, offset intersection configuration on Decatur Street, and a lack of pedestrian crossing signage.

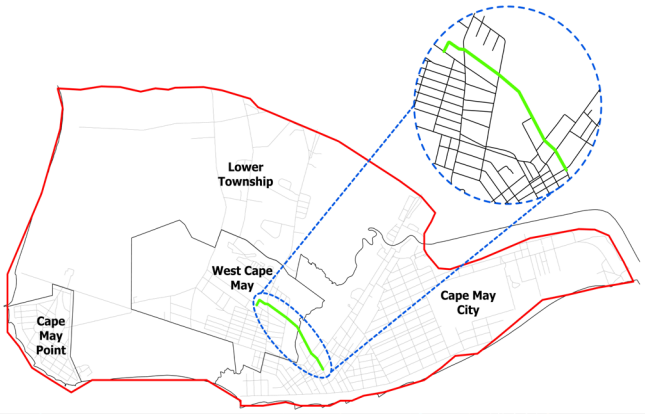
Recommendations for this road segment entail adding shoulders to rectify narrow or absent stretches, consolidating access points such as driveways to mitigate merging issues, radii revisions, and enhancing pedestrian crossing signs. Additionally, ensuring curb ramps are seamlessly integrated with well-designed sidewalks, meeting ADA standards, is imperative for pedestrian safety and accessibility.

35% of the population in the project's census block group is aged 65+ and 46% meet low-income thresholds. Efforts will be made to engage these populations in the development of the project to consider their needs.

Proposed Project: Ocean Street, Elmira Street, Leaming Avenue, Landis Avenue, and Stewart Lane from 6th Avenue to Columbia Avenue

Estimated Construction Cost: $655,000

Deployment Target: 1-3 years



Leaming Avenue Intersection

This corridor is a two-lane local road with a speed limit of 25 mph, running north to south through a dense business and residential area. This corridor consists of one travel lane in each direction with a limited section near the Creek marked with bike lanes on both sides. The marked bike lanes stop at the intersection of Elmira Street and transition to marked parking spots in the residential neighborhood.

Safety issues on this corridor include skewed and offset intersection approaches on Leaming Avenue, multiple residential driveways, a lack of marked shoulders, and outdated signal equipment. Some enhancements have been made in the corridor; however, all two-way, three-way, and four-way stop controlled intersections should be re-evaluated for additional countermeasures. Some enhancements have been made but are not consistent throughout the corridor, leading to confusion among users.

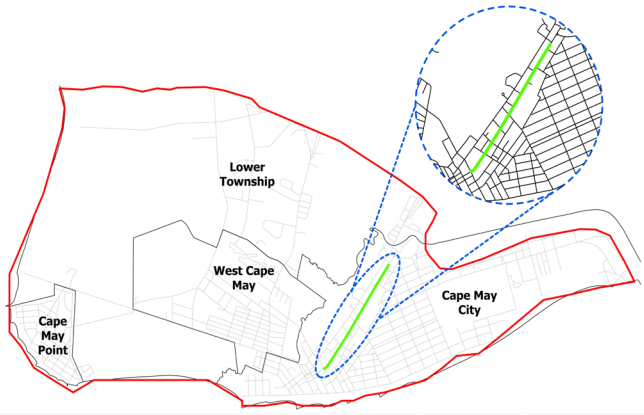
Recommendations include adding edge lines to define parking and visually narrow the roadway to promote safer speeds for all users. Narrowing pedestrian crossings should also be considered.

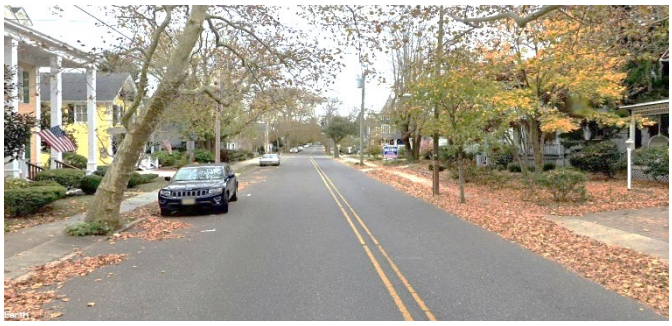
This proposed project traverses two census blocks with large portions of 65+ residents (50% and 35%). Low-income, limited English speaking, and less than high school education populations also make up a significant percentage in one of the two census block groups. These populations should also be considered in the development of the project.

<u>Proposed Project:</u> Washington Street from Ocean Street to Sidney Avenue

<u>Estimated Construction Cost:</u> $1.5M

<u>Deployment Target:</u> 3-5 years





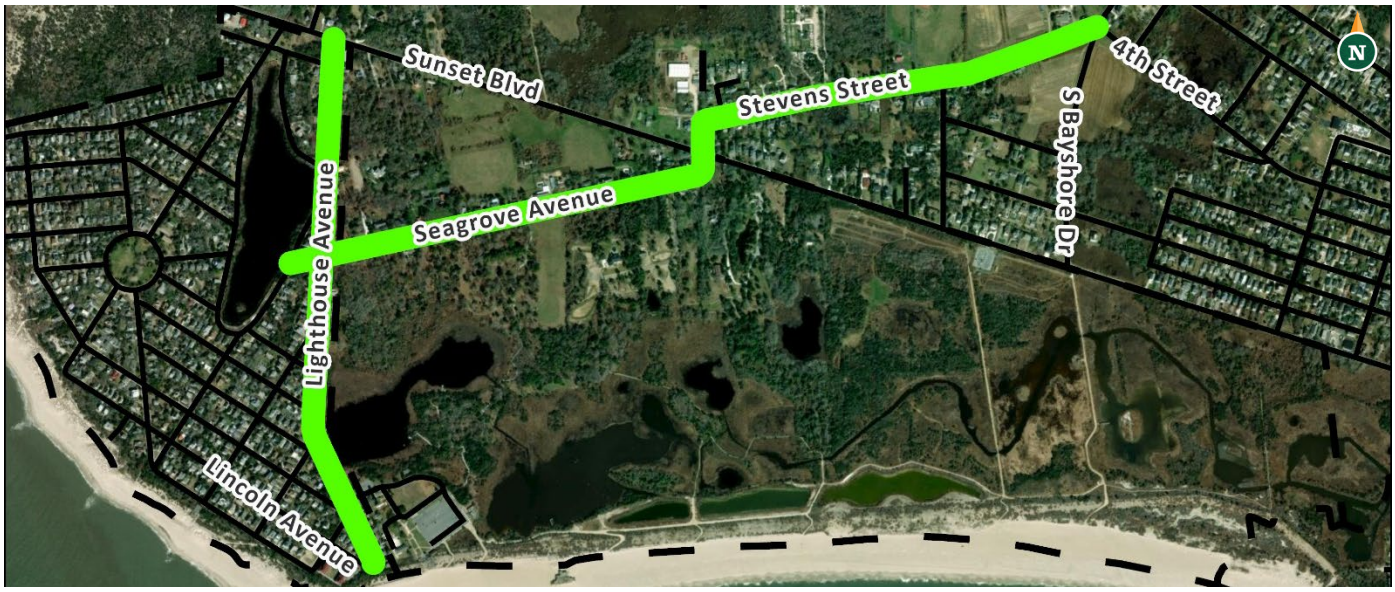
Washington Street Corridor

This road runs north to south from Sidney Avenue to Ocean Street. The speed limit was recently reduced to 20 mph. The intersection of Ocean Street is signalized and a two-way stop is provided on Sidney Avenue.

Safety issues include narrow roadways with parking on one side which then switches at an intersection obstructing drivers' visibility of pedestrians. There are numerous driveways affecting traffic flow. A major concern on this corridor is the low hanging tree branches which are a hazard to passing trucks.

Recommendations include better delineation of parking spaces, improving pedestrian crosswalks with visible signage, upgraded traffic signals, improving pedestrian lighting, and installing signs to warn to warn truck drivers of low hanging branches.

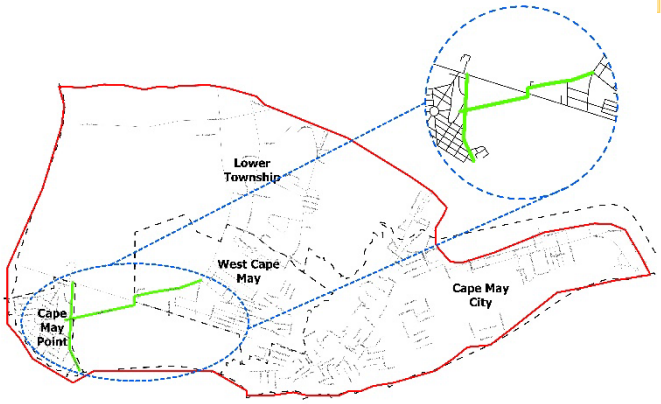
Washington Street is located on the boundary of two census blocks. Both census blocks have sizable 65+ populations (35% and 50%). Low income, unemployed, and less than high school educated are also populations of concern that should be engaged during project development.



<u>Proposed Project:</u> Lighthouse Avenue, Seagrove Avenue, and Stevens Street from South Bayshore Drive/4th Street to Lincoln Avenue

<u>Estimated Construction Cost:</u> $313,000

<u>Deployment Target:</u> 1-3 years



Seagrove Avenue and Lighthouse Avenue

Lighthouse Avenue, Seagrove Avenue and Stevens Street are popular bicycling and walking routes to reach the Cape May lighthouse. This project will provide systemic treatment countermeasures to improve safety of pedestrians and bicyclists on Lighthouse Avenue from the beach to Sunset Boulevard, Seagrove Avenue from East Lake Drive to Sunset Boulevard, and Stevens Street from Sunset Boulevard to 4th Avenue and South Bayshore Drive.

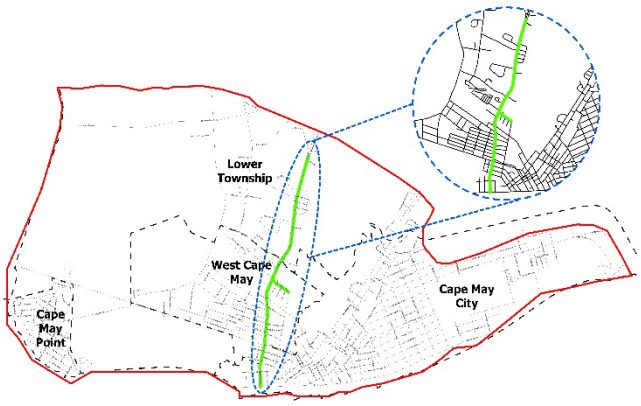
Systemic treatment countermeasures may include bicycle lanes or bicycle sharrows, warning signs, marked crosswalks, or rapid flashing beacons.

This project is located in a census block where 51% of the population is age 65+ and 15% are unemployed. These populations of concerns should be engaged during project development.

<u>Proposed Project:</u> Seashore Road, Broadway, and Central Avenue from Beach Avenue to Seashore Bridge Road

<u>Estimated Construction Cost:</u> $721,000

<u>Deployment Target:</u> 1-3 years



Seashore Road and Broadway

Broadway/Seashore is a primary route for those traveling from Lower Township and West Cape May into the City of Cape May and provides an alternate route on and off Cape Island. Broadway/Seashore Road provides access to neighborhoods, several businesses, government complexes and campgrounds. Central Avenue provides a connection to Park Avenue, serving as a parallel route to Broadway Seashore Road.

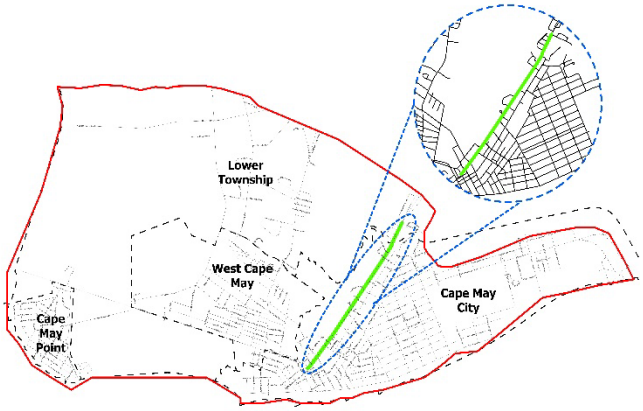
Broadway/Seashore Road sees significant bicyclists and pedestrians who use it to make their way to Cape May City's attractions. This project will consider opportunities to close sidewalk gaps as well as gaps in the on-road bicycle network to improve the safety of pedestrians and bicyclists.

This majority of this project is located in a census block group with no underserved populations that exceed the 50th percentile nationally. At its southern limit, in the vicinity of Central Avenue, the project traverses a census block with a 35% 65+ population, a 46% low-income population, as well as a 18% less than high school educated population. These populations should be engaged during project development to identify and consider their concerns.

<u>Proposed Project:</u> Lafayette Street from Jackson Street to Schellenger Street

<u>Estimated Construction Cost:</u> $300,000

<u>Deployment Target:</u> 3-5 years



Lafayette Street (County Route 633) is the primary entrance road onto Cape Island, providing a direct connection from NJ State Route 109 and the Garden State Parkway to the City of Cape May's business district. This project will provide systemic safety treatments from Ocean Street to Sidney Avenue, focused primarily on the safety of pedestrians and bicyclists.

Treatments may include crosswalks, rapid flashing beacons and bicycle sharrow markings. As this is a County Route, close coordination with Cape May County is required.

This project lies in a census block comprised of a population that is 35% 65+, 46% low-income, and 18% less than high school educated. These underserved populations should be engaged during project development to identify and consider their concerns.

Lafayette Street and Ocean Street

Proposed Project: Supplemental Planning to Assess Safe Pedestrian and Bicycle Routes

Estimated Construction Cost: $200,000

Deployment Target: 1-2 years

This study will develop alternatives, assess, and recommend safe travel routes for pedestrians and bicyclists to reach Cape Island's attractions from surrounding neighborhoods and popular lodging locations. The study will explore both on-road and off-road alternatives. This supplemental planning study will update the 2016 Bike Walk Cape May bicycle and pedestrian plan for Cape May City and Cape May Point Borough and expand upon it to include West Cape May and Lower Township.

Seashore Road/Broadway

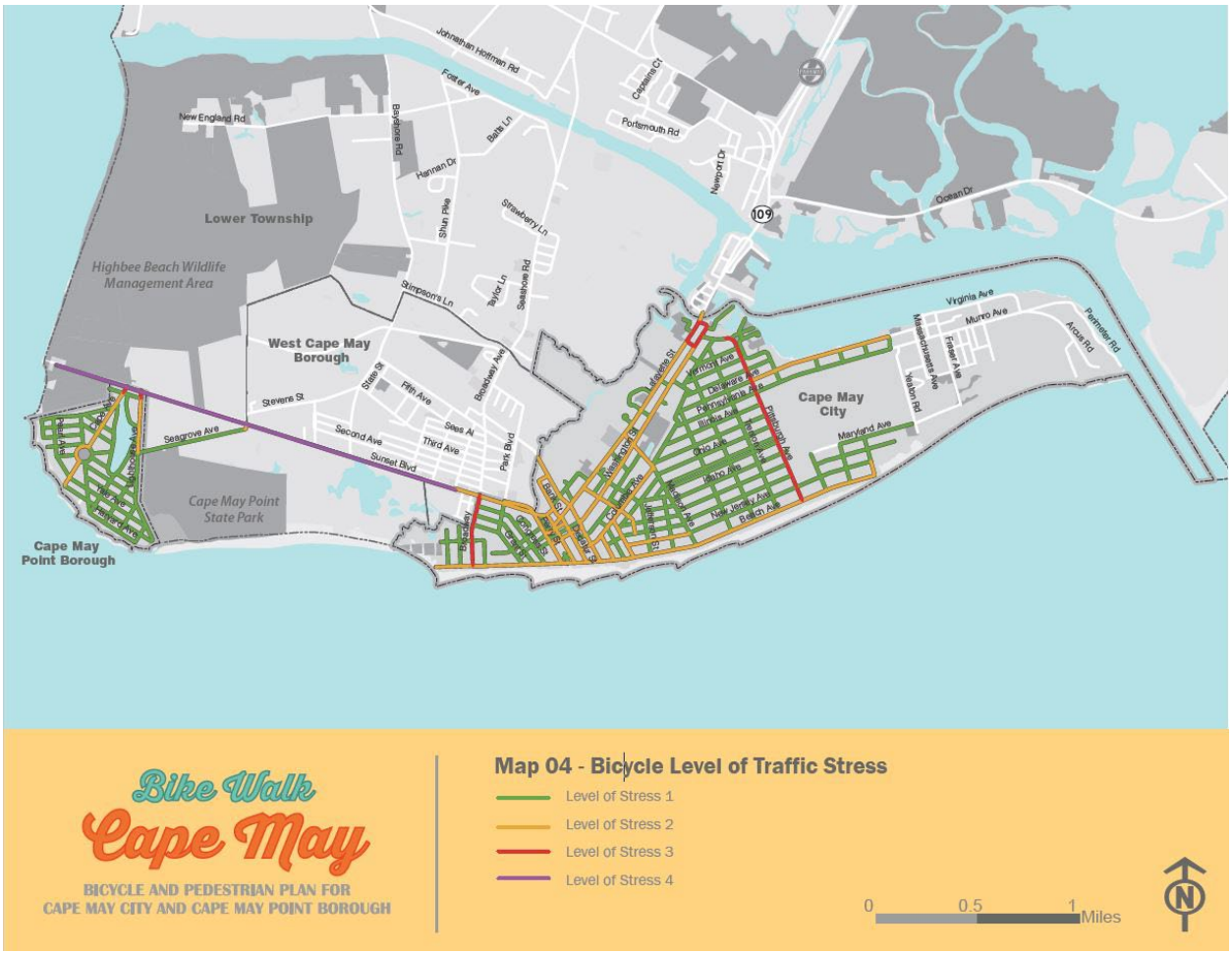


Figure 5-1: 2016 Bike Walk Cape May Bicycle Level of Stress Map

Proposed Project: Systemic Road Segment Treatments Project

Estimated Construction Cost: $1.2M

Deployment Target: 3-5 years

This project will install 6" edge lines and install/improve parking space markings on straight road segments with a speed limit of 25 mph or less to reduce lane departure crashes. 198 segments totaling 47 centerline miles on Cape Island meet this criterion.

Proposed Project: Systemic Stop-Controlled Intersection Treatments Project

Estimated Construction Cost: $1.4M

Deployment Target: 1-3 years

A systemic analysis identified stop-controlled intersections as having more significant crash potential than signalized intersections. 431 stop-controlled intersections exist on Cape Island. This project will consider upgrading/installing pedestrian crossings, installing intersection warnings such as pavement markings, and even consider updating the intersection to include a traffic signal, if warranted.

Proposed Project: Speed Humps and Speed Tables

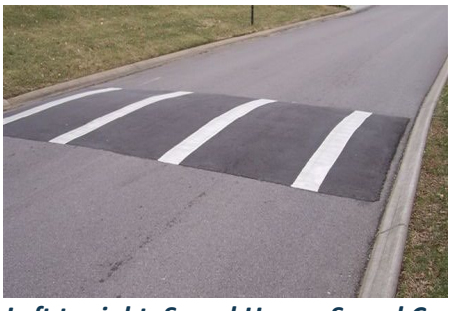
Estimated Construction Costs:

- **Speed Hump: $1,500 per location**
- **Speed Cushion: $2,000 per location**
- **Speed Table: $5,000 to $15,000 depending on drainage conditions and materials used.**

Cost Sources: Federal Highway Administration

Deployment Target: 1-5 years

Speed Humps, Speed Cushions, and Speed Tables are effective countermeasures to calm traffic in areas where there are motor vehicle conflicts with pedestrians and bicyclists. They have already been employed in some locations in Cape Island and should be considered by municipalities for implementation on municipal roads with low-speed limits where practicable. Illustrations of each type are provided below. Speed Cushions provide openings for bicycles and allow emergency vehicles to straddle them.



Left to right: Speed Hump, Speed Cushion, Speed Table

Chapter 6. Non-Infrastructure Strategies

The Steering Committee reviewed the non-infrastructure strategies that were developed as part of the 2016 City of Cape May and Cape May Point Bicycle and Pedestrian Plan to select strategies worthy of continuation. These strategies are shown below.

Table 6-1: Ongoing strategies from the 2016 Cape May Bicycle & Pedestrian Plan

Public Education / Awareness	**School Related**
• Public Service Announcements and Brochures on Safety Topics	• Integrate education programs in school curriculum
• Publish Bike Map	• Encourage "Walking School Buses" or "Bike Trains"
• Highlight Ped and Bike Improvements	• Utility SRTS or TMA resources to encourage biking and walking to school
• Promote biking and walking assets	• Integrate education programs in school curriculum
• Consider applying to become a Bike or Walk Friendly Community	
Training	**Enforcement**
Partner with community groups, police, business advocates, to provide bicycle training	• Implement a Pedestrian Safety Enforcement (PSE) Program
	• Institute a community-oriented traffic calming campaign

The project team, through the Focus Group live poll and National Night Out survey, asked stakeholders which strategies they thought would be most effective. The detailed results of the poll and survey are provided in Appendix C. The project team assessed the responses and offered the additional strategies listed below for consideration by the Steering Committee. The Steering Committee discussed each of the suggestions and decided to include them as part of the plan. The additional strategies are noted in Table 6-2.

Table 6-2: Additional Non-Infrastructure Strategies

Strategy	Deployment Target
Implement school safety competition/recognition program in elementary/middle schools	1-2 years
Implement or strengthen video/discussions, speakers for high school students	1 year
Implement social media plan, engage key influencers	1-2 years
Increase messaging to visitors through LSV / bike rental businesses and tour operators	1 year

Chapter 7. Policy and Process Assessment

7.1 Approach

The widely accepted Safe System Approach (SSA) provides a good framework to assess governmental policies, plans, and guidelines for their consideration of safety. Using the Safe System Approach, the consultant team reviewed the following county and planning documents to assess their alignment with the Safe System Approach principles and objectives.

- Cape May Point Circulation Plan, 2015
- Bike Walk Cape May, Bicycle and Pedestrian Plan for Cape May City and Cape May Point Borough, 2015
- Cape May County Comprehensive Plan, 2022
- Lower Township Land Use Development Plan Reexamination, 2018
- City of Cape May Complete Streets Policy, 2012
- West Cape May Master Plan Reexamination Report, 2015
- City of Cape May Master Plan Reexamination, 2018

Each plan was assessed for alignment with the five (5) Safe System "elements" and six (6) Safe System "principles." Areas of strong alignment were noted as well as areas where strengthening should be considered. The consultant team provided recommendations on how the municipality or county could strengthen alignment of each plan with the Safe System Approach. The consultant team also identified common themes to share across municipalities for their consideration as they develop new plans or policies.

7.2 Assessment Results

The Steering Committee offers the following recommendations for county and municipal strategic polices, plans, and guidance to improve alignment with the Safe System Approach Principles.

SSA Principle or Element	Recommendations
Death & Serious Injury are Unacceptable	» Include explicit language that the goal of safety improvements mentioned in this plan is to eliminate fatal and serious injury collisions. » Perform crash analysis or leverage existing analysis to determine locations where fatal and serious injury collisions are occurring and include recommendations for reducing these collisions.
Humans Make Mistakes	» Emphasize or acknowledge that humans will make mistakes and the transportation system should be designed to accommodate these mistakes.
Humans are Vulnerable	» Explicitly state or acknowledge that humans are vulnerable, and the transportation system should be designed around this principle by reducing speeds and separating vulnerable road users (pedestrians and bicyclists) from vehicular traffic to prevent fatal and serious injuries.
Responsibility is Shared	» Emphasize and acknowledge that the goal of all stakeholders working together is to eliminate fatal and serious injuries.

SSA Principle or Element	Recommendations
Safety is Proactive	» Emphasize or acknowledge that safety improvements should be proactive by determining issues before they cause collisions.
Redundancy is Crucial	» Emphasize the need for layers of protection in the transportation system, where if one part fails the other parts still protect people.
Safer People	» Include education, outreach, and/or enforcement recommendations to address behavioral issues such as speeding, alcohol/drug intoxication, and low seatbelt usage.
Safer Roads	» Recommend proven safety countermeasures that can be applied in the municipalities.
Safer Vehicles	» Support safer vehicle initiatives outlined by NJDOT and SJTPO.
Post-Crash Care	» Add recommendations for traffic incident management practices and improved access to emergency medical care.

Chapter 8. Implementation

8.1 Implementation Approach

As the LRSP is implemented over the next several years, the Steering Committee will remain in place and meet periodically to review progress on the strategies selected for implementation. For each non-infrastructure strategy selected, the Steering Committee will identify champions who will be responsible for spearheading implementation efforts, identifying deliverables and target dates, and reporting on implementation progress.

The CIAP is a living plan, meaning that changes to the plan's goals and strategies are subject to change.

8.2 Measuring Progress

The City of Cape May will update five-year rolling average fatality crashes for Cape Island annually to measure outcomes. Fatal and serious injury crash totals will be tracked for each year.

The City of Cape May will coordinate with the other municipalities to track implementation progress of infrastructure project implementation.

The City of Cape May's Bicycle and Pedestrian Advisory Committee will track progress of non-infrastructure strategy implementation against milestones established.

8.3 Plan Availability and Progress Reporting

The CIAP will be posted and implementation progress will be reported publicly on the City of Cape May's website, https://www.capemaycity.com/. Quarterly reporting is anticipated. The City of Cape May will provide progress tracking and reporting support.