

City of Milford



BICYCLE ADVISORY COMMITTEE AGENDA **Tuesday, October 5, 2021**

This meeting is available for viewing by the public by accessing the following link:
<https://zoom.us/j/97658996335>

Members of the public may also dial in by phone using the following number:
1 301 715 8592 Webinar ID: 976 5899 6335

Public Comments are encouraged on the items as noted on the agenda and may be submitted via email to cityclerk@milford-de.gov no later than the start of the meeting. Attendees may also alert the City Clerk that they wish to speak at the appropriate time during the meeting by submitting their name, address, and agenda item on which they would like to comment via the Zoom Q&A function or using the Raise Your Hand function during the meeting. All public comments received will be read into the record at the meeting.

COMMITTEE WORKSHOP **3:00 P.M.**

Call to Order – Planning & Economic Development Director Rob Pierce

New Business

Recommend approval of Bicycle Master Plan Update

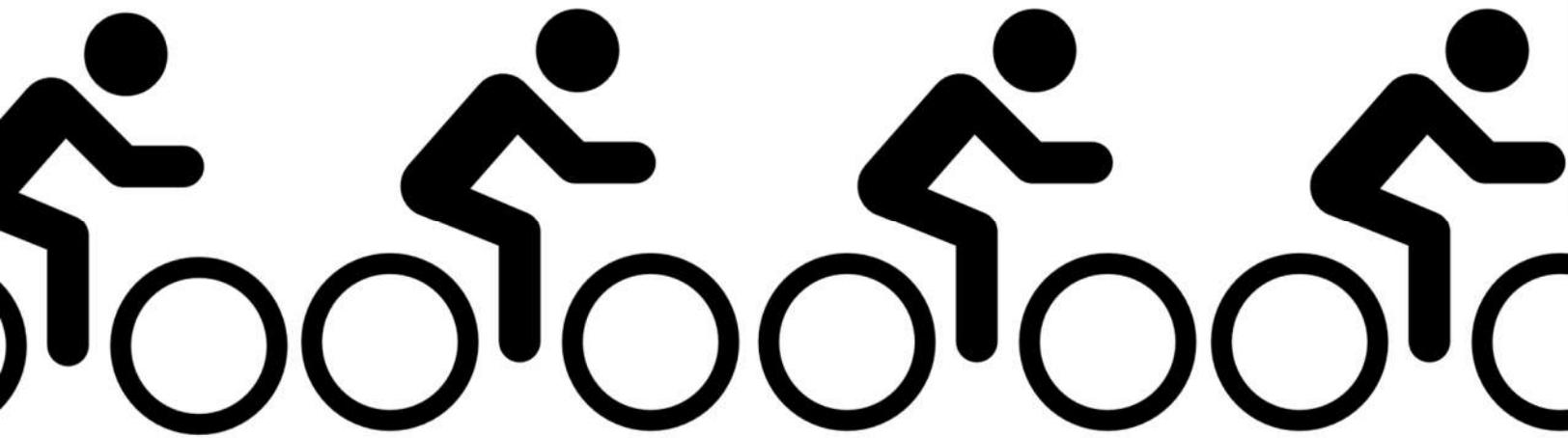
Public Comments

Adjournment

SUPPORTING DOCUMENTS MUST BE SUBMITTED TO THE CITY CLERK IN ELECTRONIC FORMAT NO LATER THAN ONE WEEK PRIOR TO MEETING; NO PAPER DOCUMENTS WILL BE ACCEPTED OR DISTRIBUTED AFTER PACKET HAS BEEN POSTED ON THE CITY OF MILFORD WEBSITE.

Milford Bicycle Master Plan

September 2021





The City of Milford Bicycle Master Plan 2021

City of Milford Bicycle Master Plan Final Recommendations Report September 2021

Executive Summary

The City of Milford applied for and was awarded a Bicycle Master Plan Grant from the Delaware Department of transportation (DelDOT) to prepare a City-Wide Bicycle Master Plan. The Bicycle Master Plan which builds on previous studies, particularly the 2011 Bicycle Plan, is consistent with the City's Comprehensive Plan, seeks to improve the Bicycle Level of Stress (as defined by DelDOT) for cyclists within the city, reduces gaps in infrastructure, and provides recommendations for a comprehensive bicycle network for the City of Milford.

The Goal of the Milford Bicycle Master Plan is “To provide the people of Milford a dynamic active transportation system composed of trails, roads, and paths that is inclusive, safe, and functional for all levels of recreation and commuting while increasing economic vitality in Milford.” To meet the goals of this study a comprehensive list of improvement options which address gaps in the existing bicycle network, facilitate connectivity, and provides a complete overall bicycle network for the City of Milford has been developed. Existing infrastructure and future planned projects were evaluated including an assessment of origins and destinations, impediments, barriers, and if the future planned projects still meet the goals or should be revised. The network was also assessed to determine where there was a need for new infrastructure and what connections were needed to connect the system holistically to ensure connectivity between locations and routes.

The goals of the study and the subsequent recommendations were developed through an extensive public involvement campaign. A Bicycle Advisory Committee (BAC) assisted the study team throughout the study providing guidance and represented the overall bicycle community. The study team met with the BAC throughout the course of the study. Additionally, three public workshops were held to engage the community. Both the BAC and the community assisted in the identification of issues, including gaps in connectivity and barriers along existing bicycle routes, as well as the development of improvements to address those issues. In addition, online support was provided through Steve Spindler Cartography during the data gathering phase of the study. Maps were made available online to allow the community to pinpoint their issues, concerns, likes/dislikes, and origins/destinations. An online survey was also utilized to gather data.

To improve the opportunity for various funding sources the recommendations were divided into regions; Northern, Southeastern, and Southwestern areas of Milford. In addition, DelDOT entered each recommendation into their Prioritization Program to assist in determining a priority listing of recommendations. The Prioritization Program takes into account connectivity, Bicycle Level of Traffic Stress, as well as origin and destination. Recommendations were evaluated using two separate tracks; Standalone Projects where each recommendation was treated as a separate, stand-alone project and



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Scenarios, where projects were grouped together to improve connectivity, reduce gaps, or improve the Bicycle Level of Traffic stress on a greater scale. This process provided the ability to prepare the top three priorities for each sub-region of the study.

Introduction

The City of Milford applied for and was awarded a Bicycle Master Plan Grant from the Delaware Department of transportation (DelDOT) to prepare a City-Wide Bicycle Master Plan. The Master Plan is consistent with and built on recommendations made in Milford's 2011 Bicycle Plan as well as the City's Comprehensive Plan. Specifically, the existing bicycle network was inventoried and in-progress, as well as planned improvements were identified. To facilitate bicycle travel, gaps in bicycle connectivity and major intersections in need of improvements or modification were identified. A database, with corresponding mapping, prioritizing recommended improvements was developed.

A Bicycle Advisory Committee (BAC) was formed to assist with the identification of gaps in Milford's existing bicycle infrastructure and to develop improvement recommendations to address those gaps. In addition, three public workshops were held throughout the study providing the public the opportunity to participate in the process.

Project Purpose & Goal

The purpose of this study is to develop a City-Wide Bicycle Master Plan (BAC) which builds on previous studies, particularly the 2011 Bicycle Plan, is consistent with the City's Comprehensive Plan, improves the Bicycle Level of Stress (as defined by DelDOT) for cyclists within the city, and provides recommendations for a comprehensive bicycle network for the City of Milford.

The goal of the Milford Bicycle Master Plan is to:

"To provide the people of Milford a dynamic active transportation system composed of trails, roads, and paths that is inclusive, safe, and functional for all levels of recreation and commuting while increasing economic vitality in Milford."

Bicycle Advisory Committee

At the outset of the study, a Bicycle Advisory Committee (BAC) was formed to provide guidance to the study team and to represent the overall bicycle community more efficiently. The BAC was comprised of representatives from the City of Milford and Milford School District, residents, business owners, and local bicycle advocates. The BAC provided valuable insight into issues with the existing bicycle network and provided recommendations for improvements to address those issues.



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The study team met with the BAC seven times throughout the study starting with a Kick-off Meeting on October 2, 2019, and a final BAC meeting on October 5, 2021. In addition to providing information and recommendations, the BAC served as a representative for the public at-large, presenting the public's concerns and recommendations to the study team facilitating community participation.

The complete listing of BAC Meetings is as follows:

- October 2, 2019: Kick-Off Meeting
- December 11, 2019: Bike Tour & BAC Meeting 2
- March 11, 2020: Workshop 1 Summary & Prioritization of Alternatives
- August 4, 2020: Issues Identification / Recommendations
- October 15, 2020: Review / Refine Alternatives
- March 10, 2021: Prioritization of Alternatives
- October 5, 2021: Review and Approval of Final Plan and Recommendations

Public Workshops

Three public workshops were held throughout the course of the study. The workshops afforded the public with the opportunity to provide their input on issues with the existing bicycle network as well as their recommendations to address those issues.

The complete listing of Public Workshops is as follows:

- February 12, 2020: Existing Facilities Analysis – Large aerials were provided for attendees to Identify Destinations, Desired Routes, and Barriers.
- September 12, 2020: Draft Recommendations / Alternatives – Based on feedback from Workshop 1 and the first three BAC Meetings, Alternative Recommendations were grouped into three areas, Northern Loop, Southwest Loop, and Southeast Loop.
- March 11, 2021: Prioritization of Alternatives. DelDOT's Prioritization Process was presented which strives to: Connect People and Destinations; Provide Separation from Traffic; Turn Stressful Routes into More Comfortable Routes.

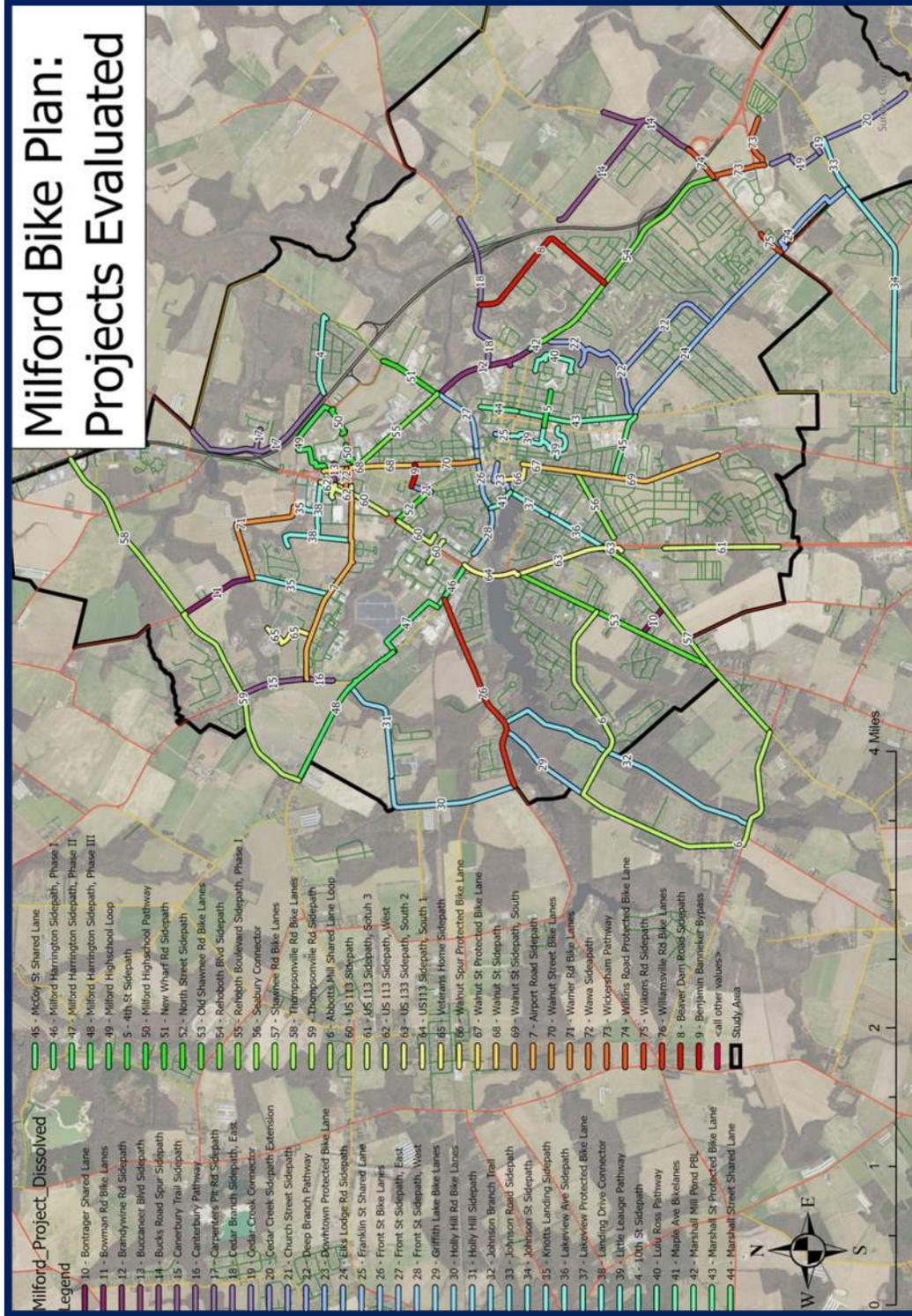
In addition to the public workshops, online surveys were prepared and utilized for the data gathering phase of the study. Online maps were developed that prompted the community to identify locations where barriers exist, missing infrastructure limits connectivity, origins and destinations are identified, and other concerns were located. A survey was also prepared and launched in conjunction with this mapping to determine what could be improved to support cycling in the City of Milford.

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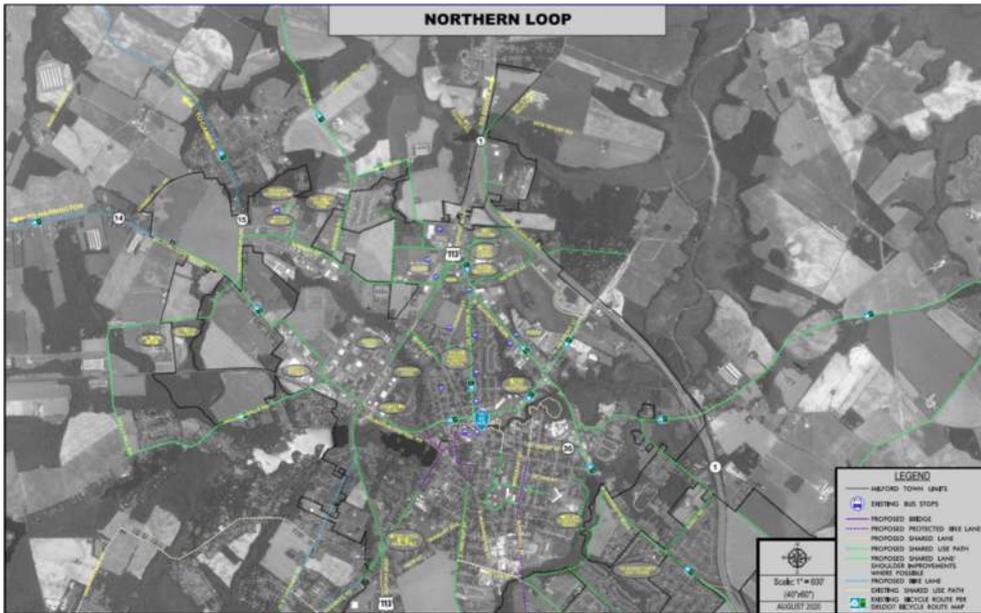
Recommendations



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Through extensive community outreach which included a twelve-mile group bicycle ride throughout the City, several community workshops, online surveys and input from the BAC, a comprehensive City-Wide Bicycle Master Plan was developed. The intent of the Master Plan was to maintain or improve the bicycle level of traffic stress along each recommended route or along each recommended feature.

The Bicycle Master Plan includes the entire City Limits of Milford. The limits of the study are geographically bound between Canterbury Road, Bowman Road, and New Wharf Road to the north,



Milford Harrington Highway, Church Hill Road, and Abbotts Mill Nature Center to the west, US 113 to Georgetown, Elks Lodge Road, and Cedar Neck Road to the south, as well as Cedar Beach Road to the east. Most of the study focus was within the municipal limits of the City of Milford, however regional connections were identified and are

included in the recommendations.

The City of Milford is unique in that it lies within both Kent and Sussex County. This provided an opportunity to expand the funding options for the recommendations, and as a result the Master Plan was divided into three sub-sections: Northern, Southwest, and Southeast. Within each section loops were developed to provide a complete logical bicycle network connecting people with places. Efforts were made to ensure improvements from various Loops connect to other Loops to facilitate connectivity. For example, existing facilities south of N. Front Street in the Northern Loop connect to the Southern Loops; and McCoy Street improvements connects the Southeast and Southwest loops. The following graphics are divided into regions and provide a composite of all the recommended improvements.

Recommendations in the Northern Loop include improvements to: N. Front Street, Walnut Street, Rehoboth Avenue, Airport Road, Canterbury Road, Milford Harrington Highway, Big Stone Beach Road, Carpenters Pit Road, Bowman Road, Road 406, Holly Hill Road, and Williamsville Road.

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Recommendations in the Southwest Loop include improvements to: Abbotts Mill Road, Griffith Lake Drive, Meadow Brook Lane, Old Shawnee Road, Shawnee Road, US 113, S. Walnut Street and McCoy Street.

Recommendations to the Southeast Loop include improvements to: S. Walnut Street, Marshall Street, S.



Rehoboth Boulevard, Elks Lodge Road, Evans Street, SE Front Street, Cedar Creek Road, Beaver Dam Road, S. Cedar Creek Road, and Wilkins Road.





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Regional Routes

To maximize the connectivity from areas within the City of Milford to the outlying areas around the City, regional routes were also recommended as part of this study. Various routes were identified as suggested routes to connect the City of Milford with Harrington, Camden, Frederica, Slaughter Beach, Lewes, Lincoln, and Georgetown. These locations provide access to corporate centers, recreation, and communities that would enable the City of Milford to reach and provide additional points of interest, while working with the larger County Comprehensive Plan to improve bicycle infrastructure.

The following Routes have been identified as Proposed Regional Routes:

Project Name: Milford to Harrington

Project Description: Provide improved shoulders along Route 14 from the western limits of Milford to the City of Harrington.

Project Name: Milford to Frederica

Project Description: Provide improved shoulders or signage for shared lane from the City of Milford, north along Bowman Road to Tub Mill Pond Road to Frederica Road to the Town of Frederica.

Project Name: Milford to Slaughter Beach

Project Description: Provide improved shoulders or signage for shared lanes along Route 36 from SR1 to Slaughter Beach. Then continue south through the Town of Slaughter Beach with a return loop heading west to Argos Corner. Provide crossing to Pine Haven Road and continuing west until Cedar Creek at Route 30.

Project Name: Milford to Lewes

Project Description: Provide improved shoulders or signage for shared lane along Route 30 and Route 5 to Milton south to the Georgetown to Lewes Trail to connect into the City of Lewes.

Project Name: Milford to Lincoln

Project Description: Provide improved shoulders or protected bike lane from the Marshall Street and Elks Lodge Road intersection south to the Lincoln area; could also extend the proposed path along S. Walnut Street to N. Old State Road to Johnson Road for connection to the Lincoln area.

Project Name: Milford to Camden

Project Description: Provide improved shoulders or signage for shared lane along Route 15 from Church Hill Road to Route 13, continuing to follow Route 13 to the Towns of Woodside and Camden.

Type of Infrastructure

The type of recommended improvement was developed to fit the existing setting of where it would be located taking into account, traffic volumes on those roads and available right-of-way. Where there was sufficient right of way, a shared use path, otherwise known as a bikeway that is physically separated from motorized vehicular traffic by an open space or barrier, was suggested. This type of improvement serves the most number of users and experience levels, through a low stress infrastructure option. Bicycle lanes

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or protected bicycle lanes were suggested for roadways that were wide enough to accommodate them and designate a portion of the roadway for bicycles through pavement markings. This option can work on roadways with or without on-street parking. For roadways that already have shoulders, improvements to the shoulders were recommended to better accommodate bicycles. On a few of the Regional Routes where the traffic volumes are relatively low, a shared lane was suggested as a method of providing connectivity without major infrastructure improvements.

LEGEND

- MILFORD TOWN LIMITS
-  EXISTING BUS STOPS
- PROPOSED BRIDGE
- PROPOSED PROTECTED BIKE LANE
- PROPOSED SHARED LANE
- PROPOSED SHARED USE PATH
- PROPOSED SHARED LANE/
SHOULDER IMPROVEMENTS
WHERE POSSIBLE
- PROPOSED BIKE LANE
- EXISTING SHARED USE PATH
-  EXISTING BICYCLE ROUTE PER
DELDOT BICYCLE ROUTE MAP

Shared Use Path



Bike Lane



Shared Lane /Shoulder Improvement



Shared Lane



Protected Bike Lane

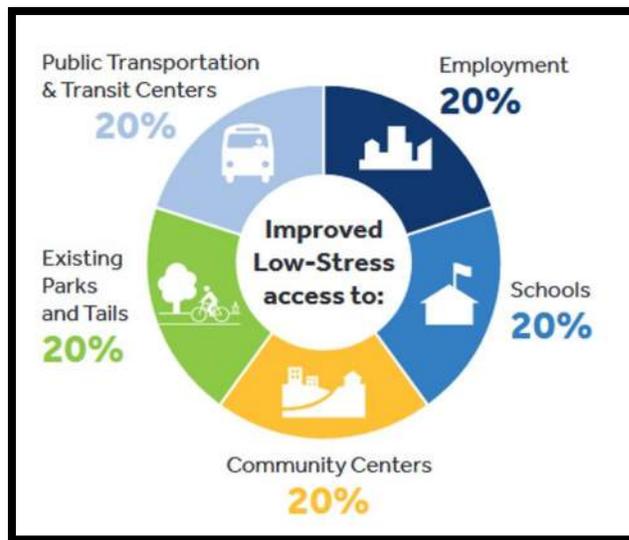
Prioritization

Recommended improvements were prioritized using DelDOT’s Prioritization Process. This process considers many factors including connecting the maximum number of people with local points of interest, creating conditions where cyclists feel safe and comfortable, and improving the level of traffic stress for riders. DelDOT’s Prioritization Process incorporates various groupings of information to weigh connectivity, including origin and destination routing on each Level of Traffic Stress based on route, distance, and detours from the shortest possible route. Measured improvements are then noted between scenarios and the results are scaled and ranked relative to one another. Projects were evaluated as

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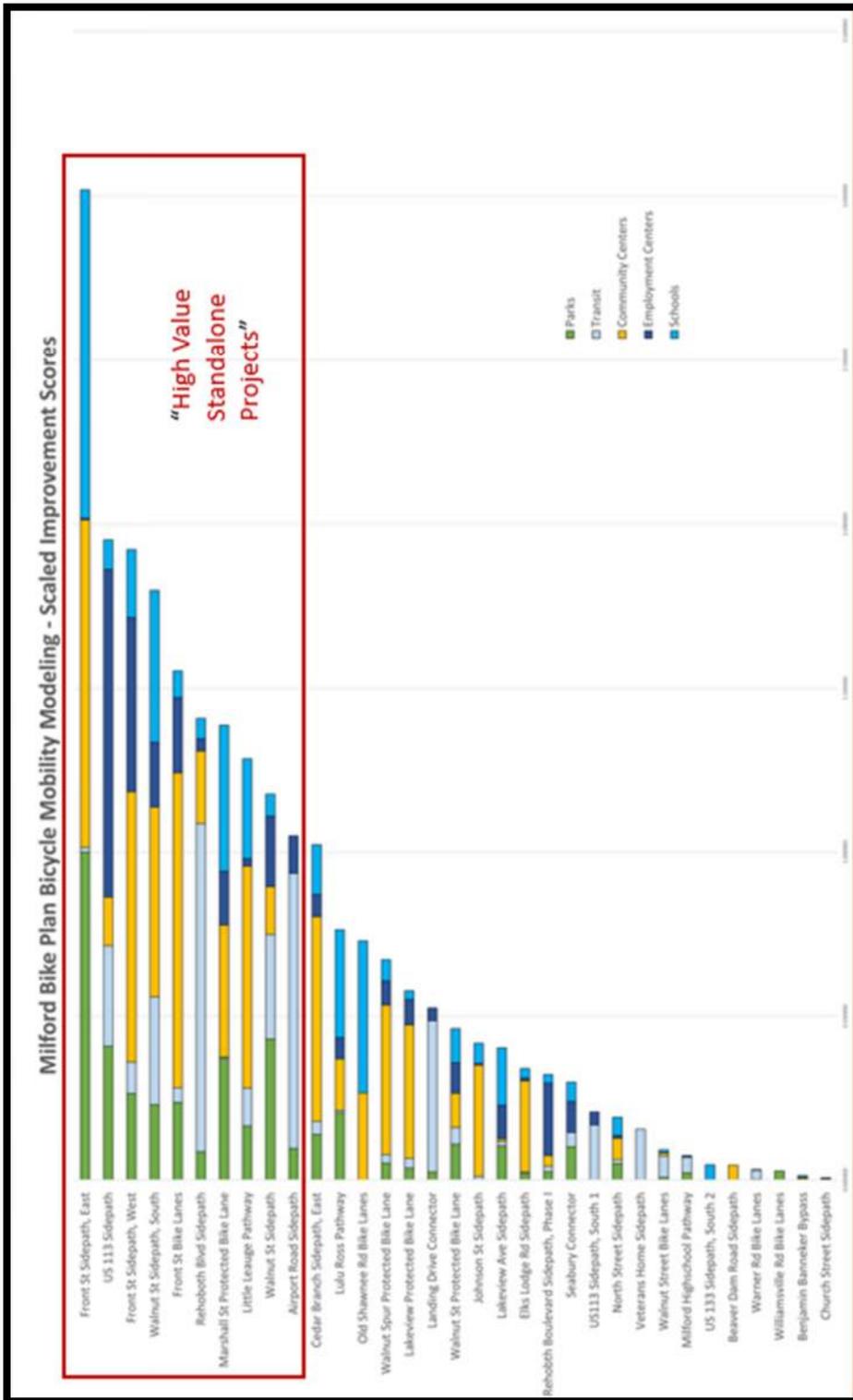
Standalone Projects or Scenarios. Standalone projects consist of a single road or a portion of a road which provides an independent benefit. If the project can be divided into logical parts or phases, each phase is ranked separately. Some of these projects require others to be built before they are useful. Scenarios are a combination of projects. Several scenarios were evaluated in this study.

The figure below illustrates the weighting for each of the 5 destination clusters and is used to determine the value a particular project or group of projects brings by improving the low stress connectivity to each of the destinations.

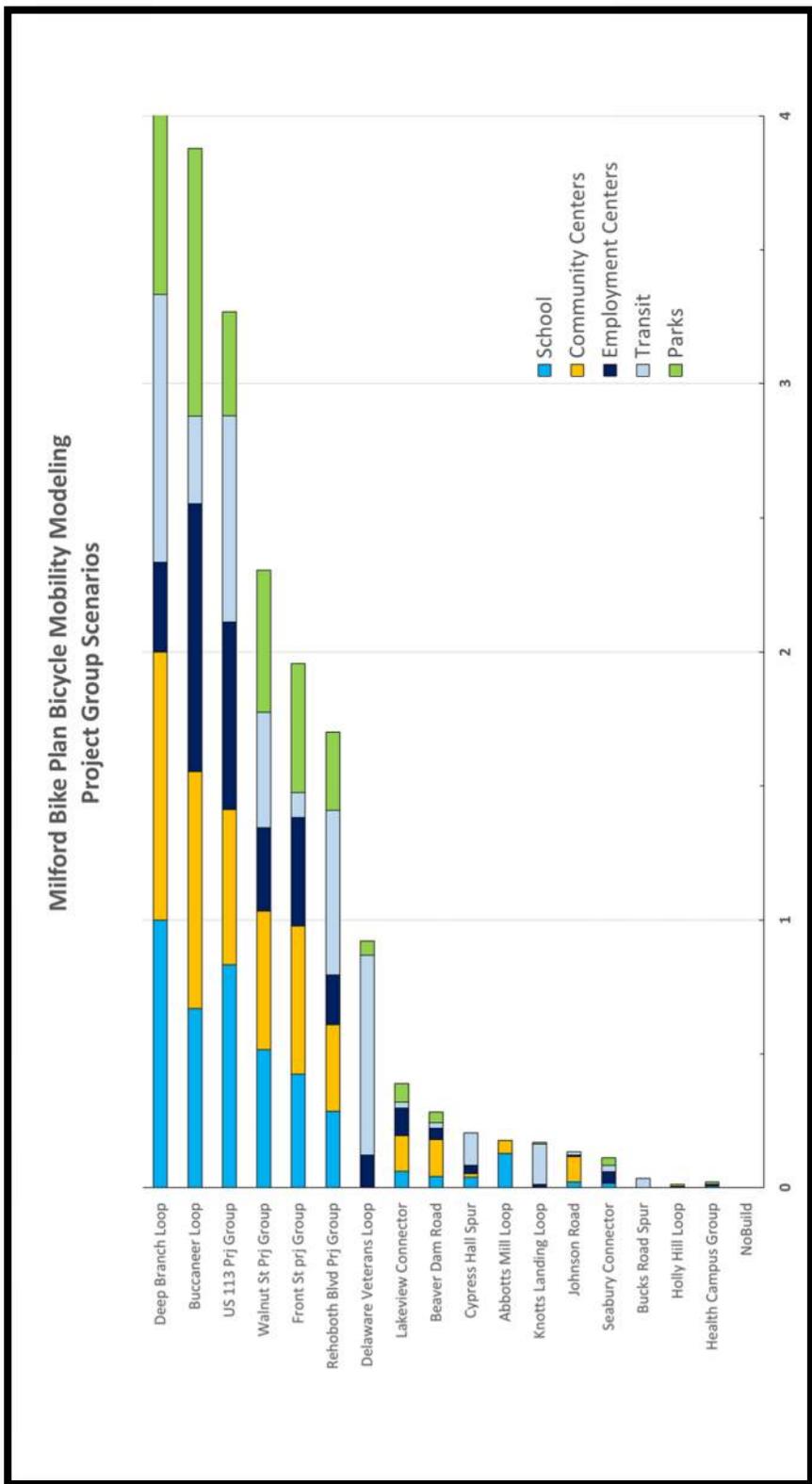


Using these factors, the various improvement recommendations were prioritized. The following graphics illustrate the prioritization of these improvement options based on Standalone Projects and Scenarios.

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Based on DelDOT's rankings, the following High Value Stand Alone Projects were identified per region (or Loop).

Northern Loop

- Front Street Side Path, East, Front Street
- US 113 Side Path
- Front Street Side Path, West
- Walnut Street Side Path, South, Walnut Street Side Path
- Airport Road, Side Path

Southeast Loop

- Rehoboth Boulevard Side Path
- Little League Parkway
- Marshall Street protected Bike Lane

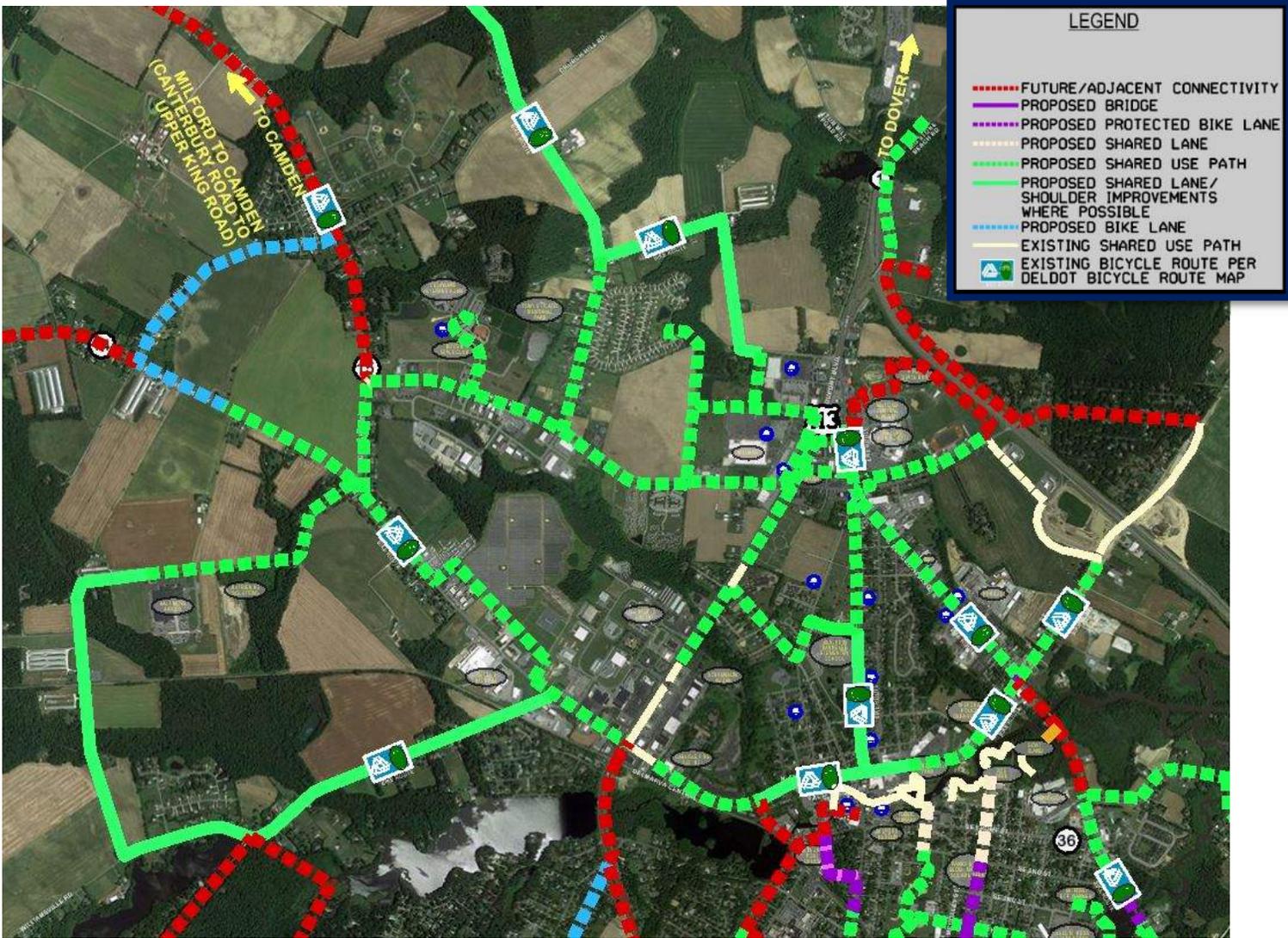
Southwest Loop

- No projects were identified in this region based on DelDOT's criteria

In addition to DelDOT's rankings, the City of Milford develop a listing of priority projects based on several factors including guidance from the Bicycle Advisory Committee, the identification of destinations, desired routes, barriers, and other community feedback. From this information the City developed a list of priority projects per region. Some of these priorities are consistent with the priorities identified by DelDOT; however, some vary and are more reflective of the City's needs and vision for a Citywide bicycle network. The City's priorities are as follows:

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NORTHERN AREA

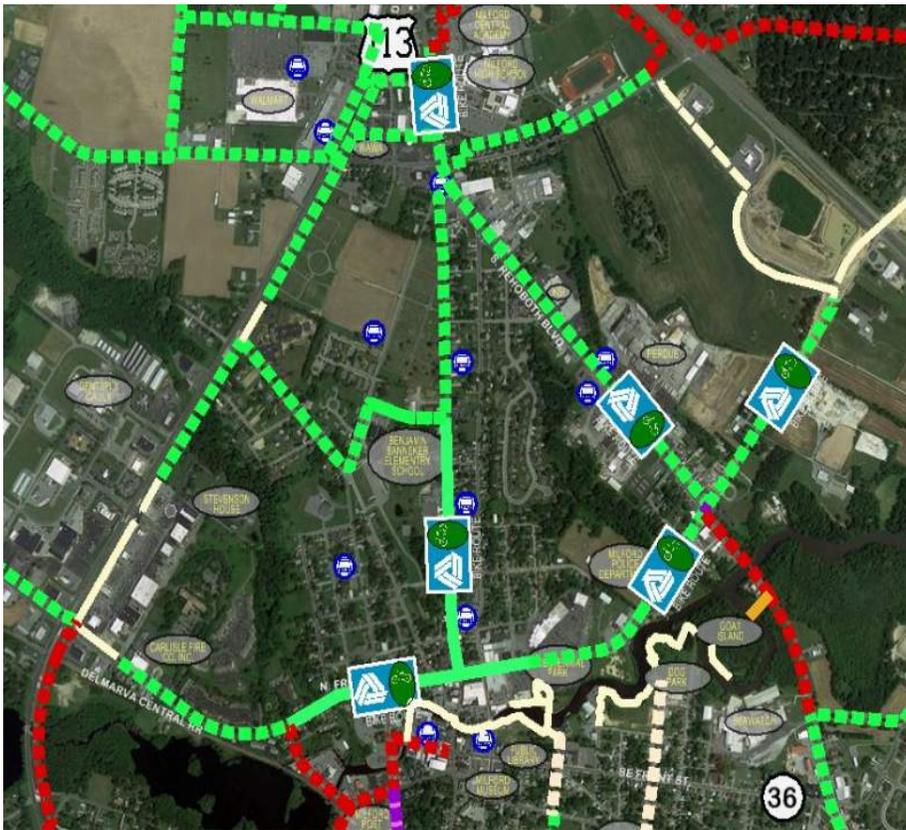


The City of Milford Bicycle Master Plan 2021

Ranking: 1

Project Name: Loop A – Buccaneer Loop

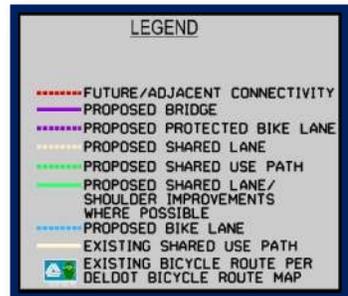
Project Description: Beginning downtown, the bicycle loop would head west from Maple Avenue to Route 113 with the construction of a shared use path along the north side of Route 14. The shared use path will continue north along the east side of Route 113 to Airport Road and Buccaneer Boulevard. Multiple shared use connections would be provided heading east to Walnut Street and the Milford School District property. An additional shared use path would be constructed along NE Tenth Street and through the school district property heading east to Silicato Parkway. The shared use path would continue along the



east side of Silicato Parkway until the on/off ramp of Route 1 where the path shifts to the west side of Silicato Parkway. The shared use path would then continue along the north side of Route 14 from Silicato Parkway until the Riverwalk Shopping Center located in downtown Milford completing the overall loop.

Length: 19,000 feet (overall)
5,700 (existing)

Purpose: Utility trips, transportation to work,



recreation

- Project Name: Benjamin Banneker Bypass

Project Description: A shared use path would be constructed from the Milford High School south down N. Walnut Street to Armory property, then traveling through the Armory property to Banneker Elementary School. The shared use path would then continue along the north side of North Street to the outer proposed loop located along Route 113. Additional connections of the bicycle network would be made from the Milford Armory down Walnut Street to NE/NW Front Street.

Length: 5,300 feet

Purpose: connection to school property, recreation.

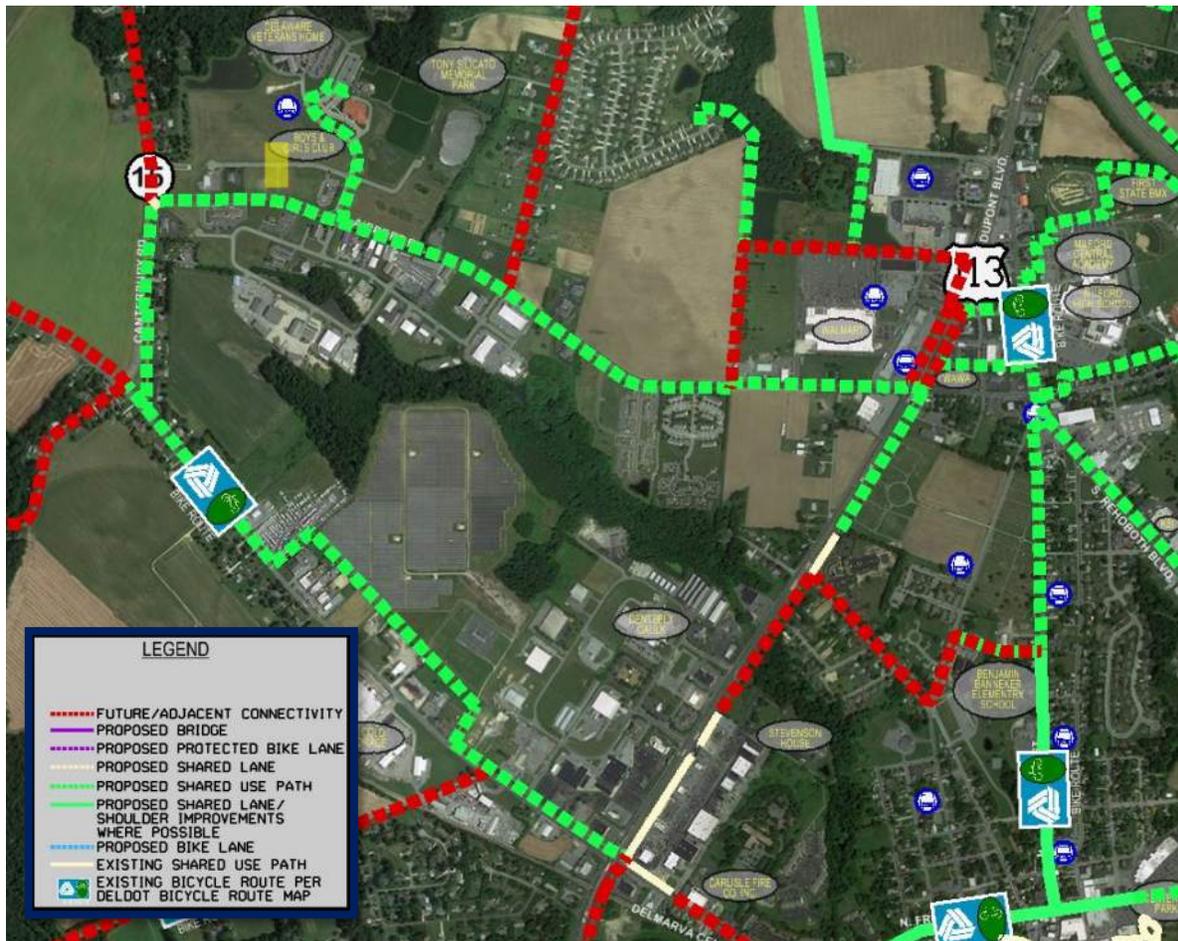
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- Project Name: Industrial Bypass
 Project Description: A shared use path would be constructed along the east side of N. Rehoboth Boulevard from Route 14 to Airport Road.
 Length: 4,200 feet
 Purpose: Transportation to work, recreation, connection to school property.

Ranking: 2

Project Name: Loop B – Delaware Veterans Loop

Project Description: Begin at the intersection of Airport Road & US 113, heading west along the north side of Airport Road with a shared use path. The shared use path would cross Airport Road near the



Walmart entrance and continue along the south side of Airport Road to Route 15. A connection would be made across Airport Road connecting with the City Parks & Recreation facility and Boys and Girls Club via shared use path within the Independence Commons business park. The shared use path would continue along the east side of Route 15 from Airport Road to Route 14. The shared use path would continue along

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the north side of Route 14 from Route 15 to Route 113, with some sections taking advantage of an existing electric utility easement.

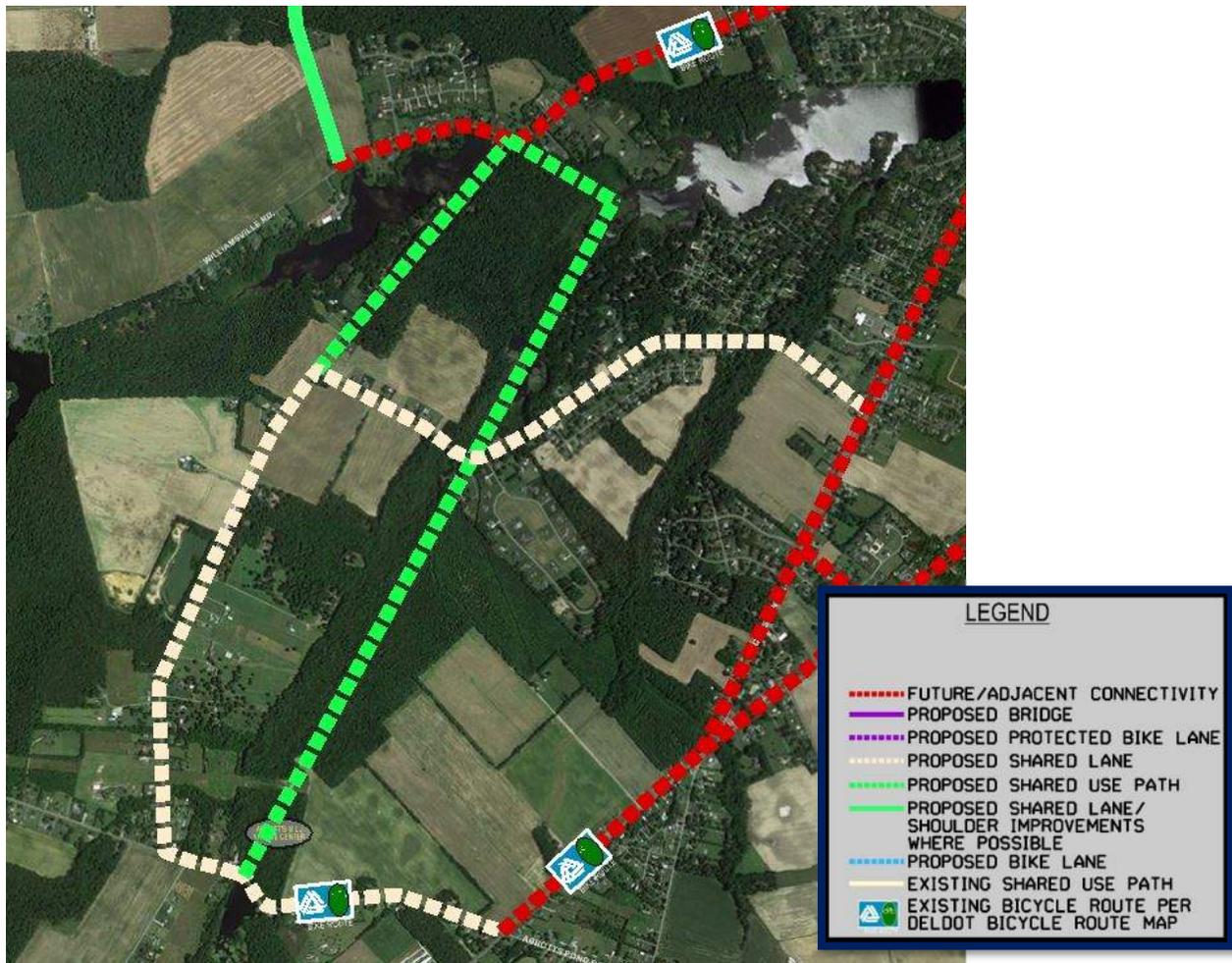
Length: 16,000 feet

Purpose: Utility trips, connecting neighborhoods with the Boys and Girls Club and Milford Parks.

Priority routes identified by both DeIDOT and the City of Milford in the Northern Loop include the following:

- US 113
- Airport Road
- Walnut Street
- Front Street Side Path, East
- Front Street Side Path, West
- Front Street Path Bike Lanes
- N. Rehoboth Boulevard

SOUTHWEST AREA



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Ranking: 1

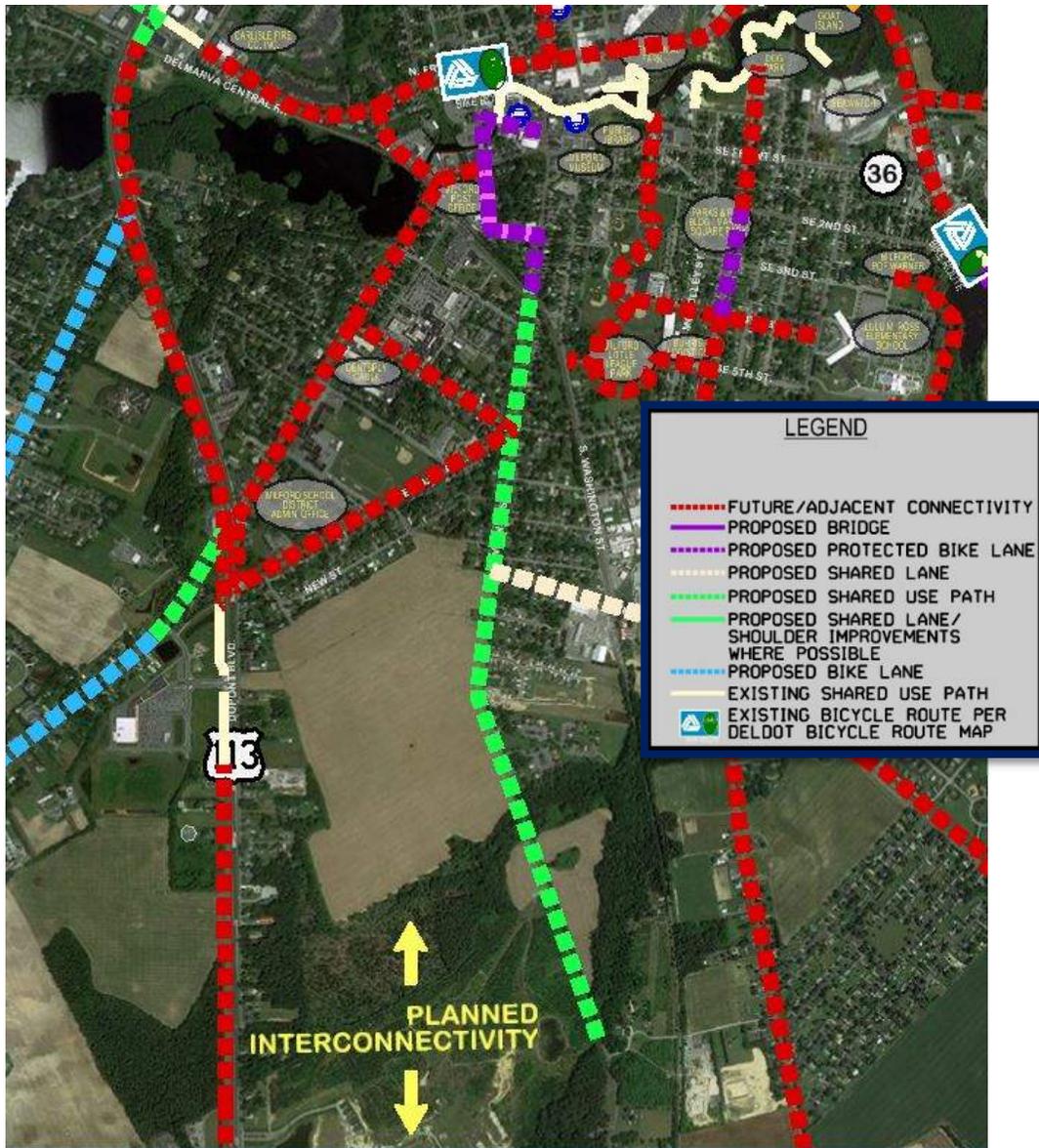
Project Name: Segment B – Walnut Spur

Project Description: Beginning in downtown Milford, construct a protected bike lane from Causey Avenue along Maple Avenue or Church Street to S. Walnut Street. Continue with protected path until railroad before changing to shared use path along the west side of S. Walnut Street. Extend south until the Milford Ponds subdivision.

Length: 9,500 feet

Purpose: Connecting neighborhoods with downtown, schools, parks, recreation.

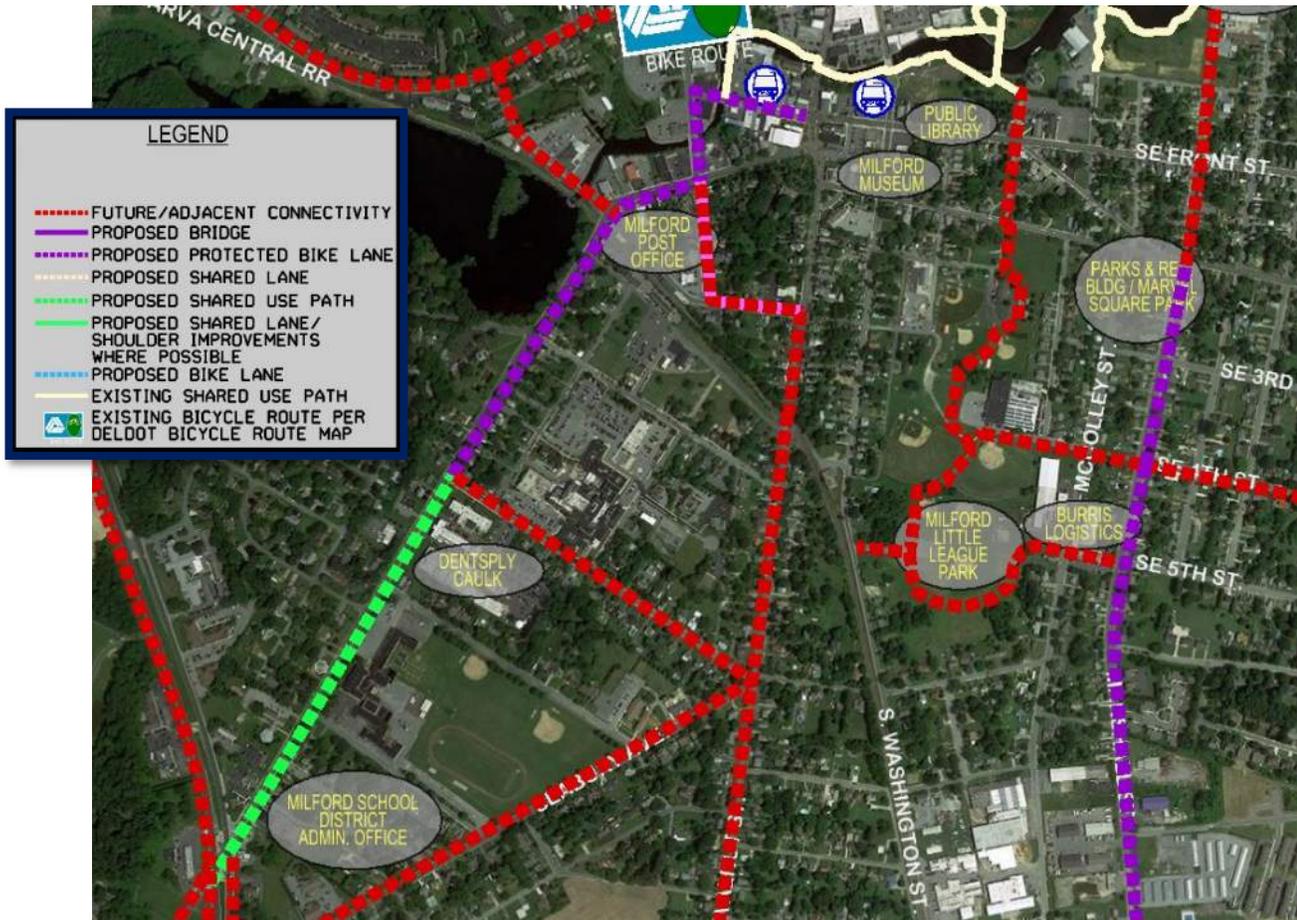
Ranking: 2



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Project Name: Segment C – Lakeview Connector

Project Description: Beginning at the intersection of Lakeview Avenue and Route 113, construct a shared use path along the south side of Lakeview Avenue until the right-of-way is restricted. At this point, shift to a protected bike lane for the remainder of Lakeview Avenue/Causeway Avenue before



turning north onto Church Street.

Length: 5,600 feet

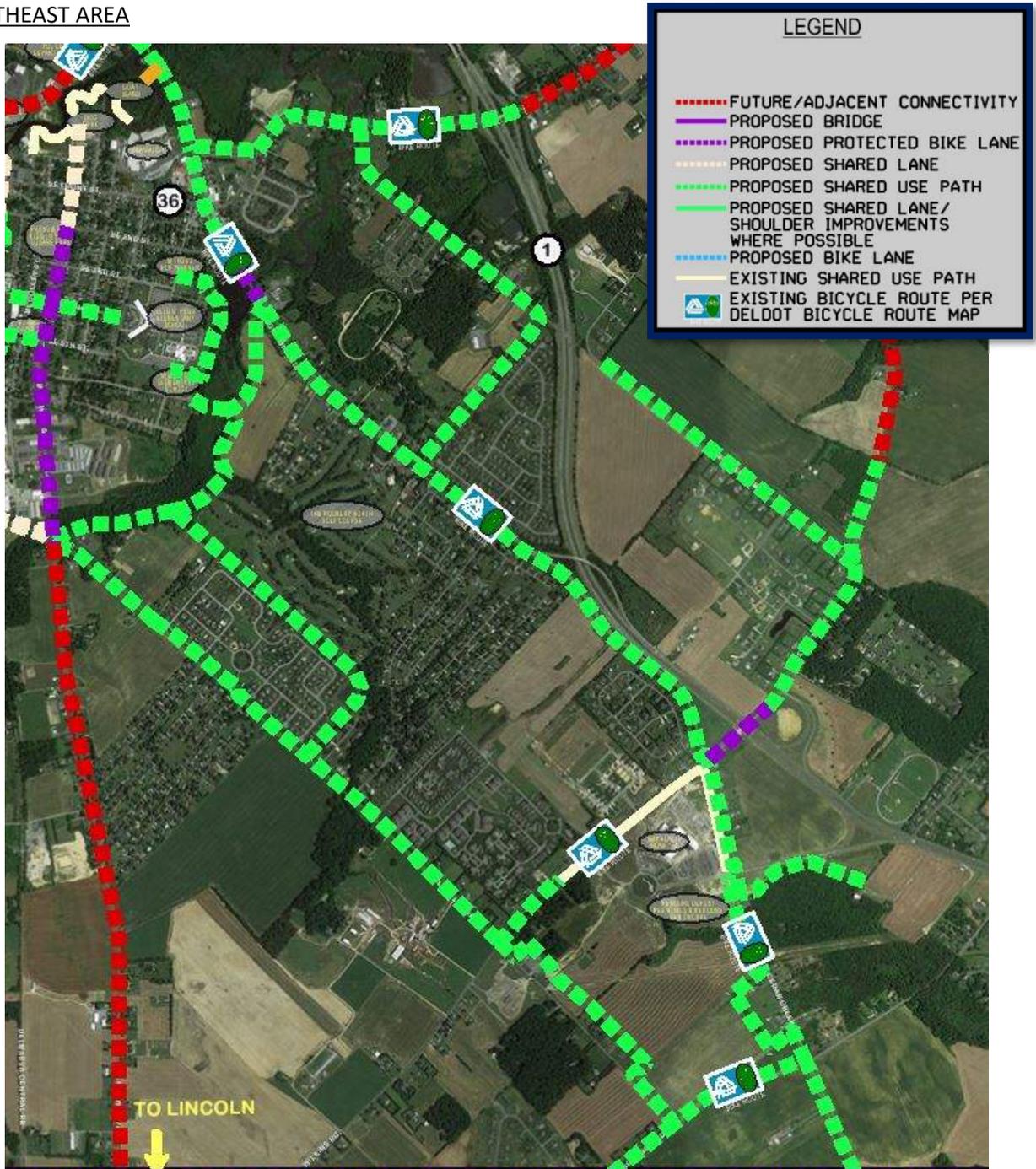
Purpose: Connecting neighborhoods with downtown, schools, parks, recreation.

Priority routes identified by both DeLDOT and the City of Milford in the South West Loop include the following:

- Walnut Street South

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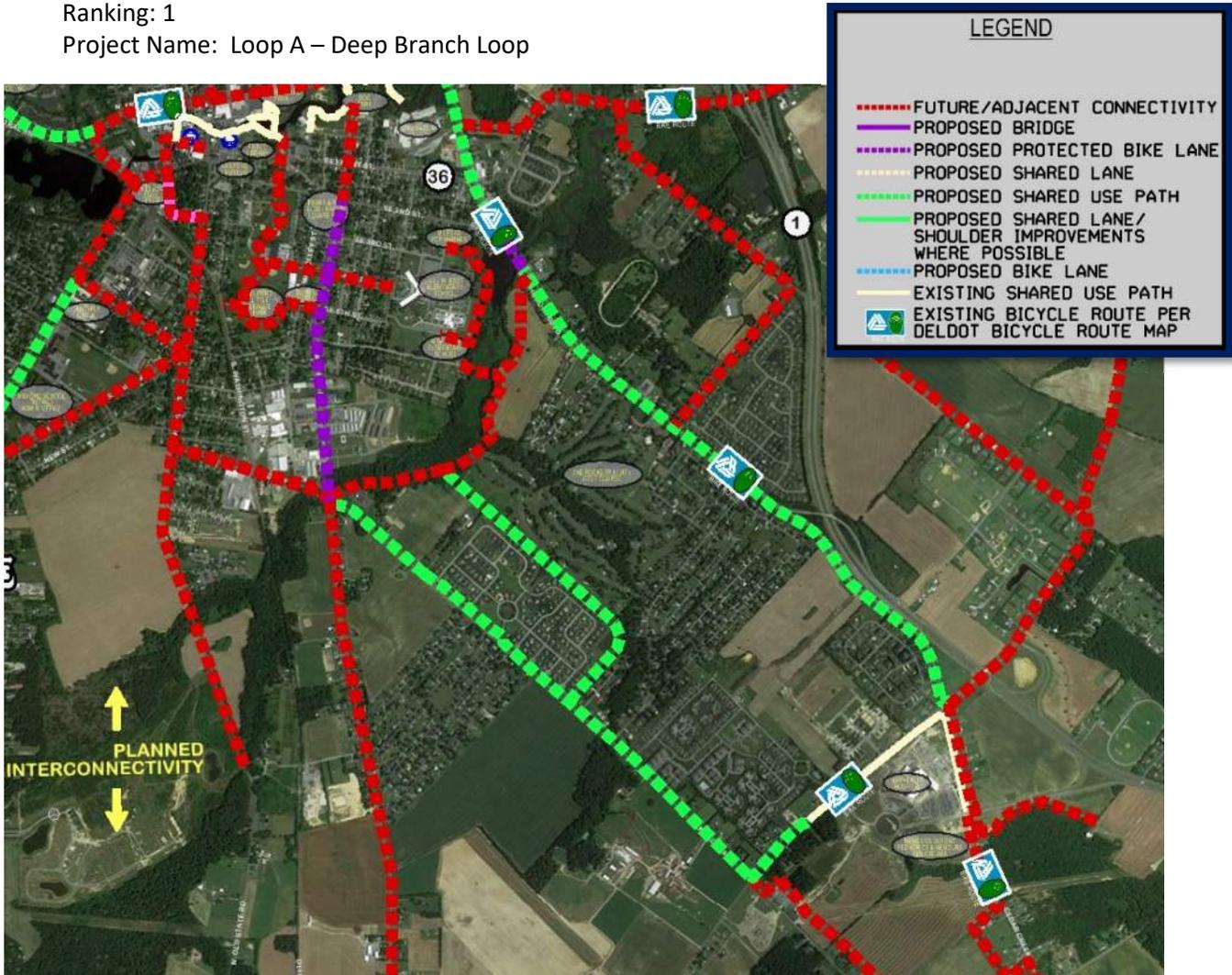
SOUTHEAST AREA



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Ranking: 1

Project Name: Loop A – Deep Branch Loop



Project Description: Beginning at the Marshall at the Riverwalk, the bicycle loop will head south as a shared lane until SE Second Street. From SE Second Street to Elks Lodge Road, construct a protected bike lane on both sides of Marshall Street. Continue along Elks Lodge Road from Marshall Street to Wilkins Road with a shared use path along the east side of Elks Lodge Road. Continue along the south side of Wilkins Road heading east with a shared use path. Then head north along the west side of Rehoboth Blvd with a shared use path until Route 14.

Length: 32,000 feet (entire loop)

2,500 feet (existing)

Purpose: Connecting neighborhoods to downtown, schools, parks, recreation. Transportation to work, utility trips.

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Ranking: 2

Project Name: Segment B – Railroad Connector

Project Description: Provide a shared lane or bike lane connector from S. Walnut Street to Marshall Street.

Length: 2,400 feet

Purpose: Interconnection of bicycle network.



LEGEND

- FUTURE/ADJACENT CONNECTIVITY
- PROPOSED BRIDGE
- PROPOSED PROTECTED BIKE LANE
- PROPOSED SHARED LANE
- PROPOSED SHARED USE PATH
- PROPOSED SHARED LANE/
SHOULDER IMPROVEMENTS
WHERE POSSIBLE
- PROPOSED BIKE LANE
- EXISTING SHARED USE PATH
- EXISTING BICYCLE ROUTE PER
DELDOT BICYCLE ROUTE MAP



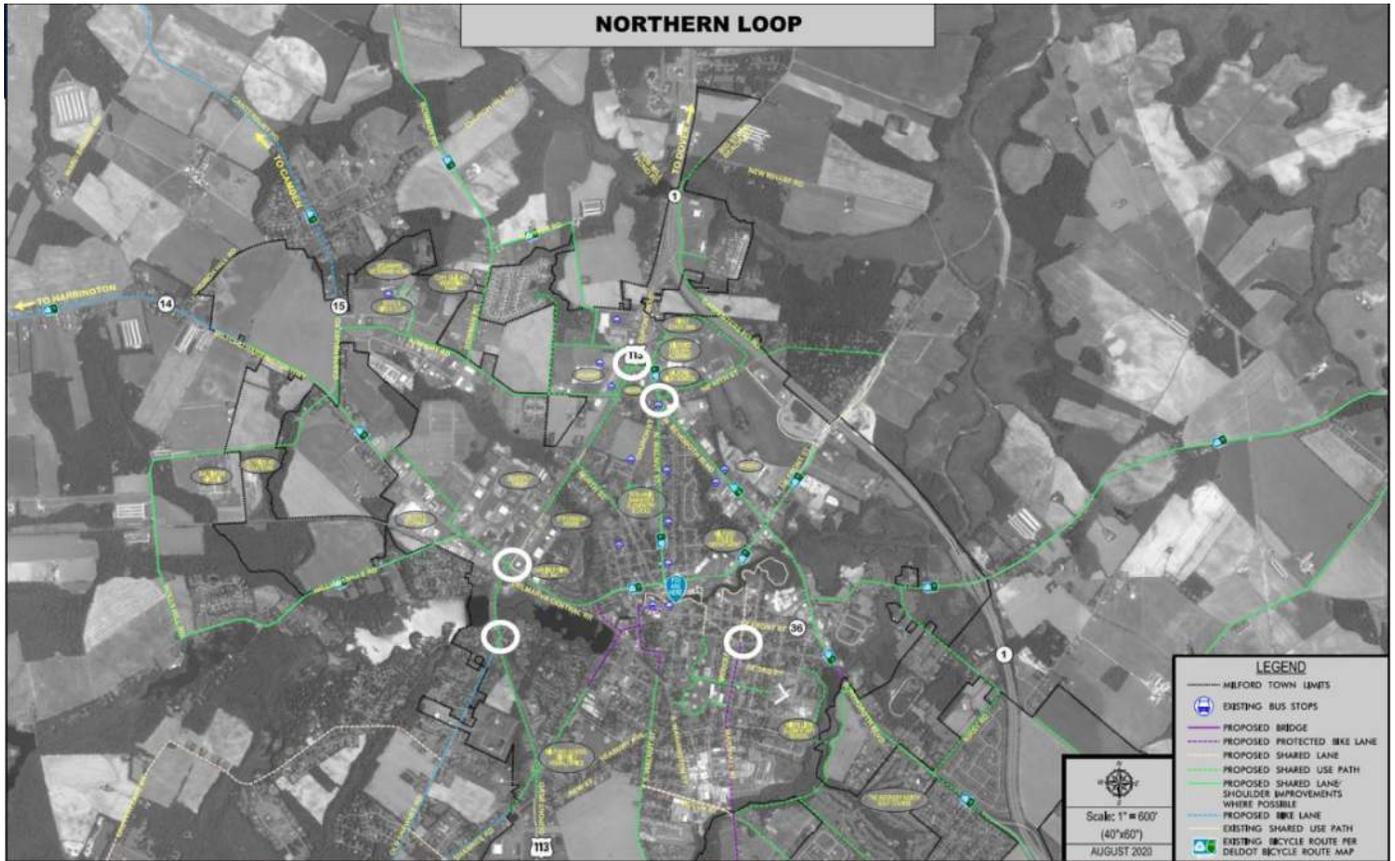
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In addition to planned routes enabling safer, more direct origin/destination routes, the study reviewed intersections that if improved would greatly improve the connectivity and completion of infrastructure gaps. These intersection improvement projects are standalone projects that can be funded through multiple sources but would enhance the overall bicycle network prescribed in this study. The following intersections were identified as requiring minor to major improvements:

- SE Second/Marshall Street
- Marshall Street/Elks Lodge Road
- Wilkins Road/Elks Lodge Road
- Elks Lodge Road/Johnson Road
- Johnson Road/Route 30
- Route 30/Wellness Way
- Route 30/Wilkins Road/
- Route 30/Kirby Road
- Rehoboth Boulevard/SE Second Street
- Rehoboth Boulevard/NE Front Street
- Rehoboth Boulevard/SE Front Street
- Rehoboth Boulevard/NE Tenth Street/N Walnut Street/N Washington Street
- Beaverdam Road/Route 36
- State Route 14/US 113
- US 113/Airport Road
- US 113/Buccaneer Boulevard
- US 113/Kings Highway
- US 113/Lakeview Avenue

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The intersections are noted on the maps below with white circles.



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POLICY RECOMMENDATIONS

To enhance and promote the overall goals of the plans it is important to also make policy recommendations that will work toward improving cycling throughout the city. Policies create uniform criteria for bicycle facilities in order to achieve a consistent city-wide approach to bicycle facilities. With this in mind it is important to provide direction to improve conditions and opportunities for walking and bicycling. The follow policy recommendations are suggested:

1. Add Bike Parking requirements to the zoning code.
2. Require bike trails and walking paths as part of open space amenities.
3. Revise the current Chapter 84 Bicycle, Skateboards and Other Conveyances to be more bike friendly.
4. Require shared use path construction along the frontage of new developments on City maintained streets in accordance with the Master Plan