

FINAL REPORT

Town of Warrenton

Bicycle and Pedestrian Plan

FEBRUARY 2020



PREPARED FOR

Town of
Warrenton
NORTH CAROLINA



PREPARED BY





Acknowledgments

Steering Committee

The project team would like to thank the following Steering Committee members for providing guidance throughout the planning process:

Town of Warrenton, Town
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Town of Warrenton, Office of
the Mayor

Town of Warrenton, Town
Administration

Town of Warrenton,
Revitalization Committee

Town of Warrenton Police
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Warren County Economic
Development

Warren County Public Schools

Kerr-Tar Rural Planning
Organization

U.S. Department of the Interior,
National Park Service

North Carolina Department of
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Bicycle and Pedestrian
Transportation

VHB Engineering NC, P.C.

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Executive Summary

About This Plan

The Town of Warrenton Bicycle and Pedestrian Master Plan (“the Plan”) provides guidance for the Town, North Carolina Department of Transportation (NCDOT), and other stakeholders in developing improvements to its bicycle and pedestrian infrastructure, programs, and policies. The Plan was developed through extensive public outreach, review of existing conditions, coordination with a dedicated Steering Committee, and consideration of the Town’s vision and goals for making Warrenton a more walkable and bicycle-friendly place that matched its friendly, diverse, charming, and economically vibrant character.

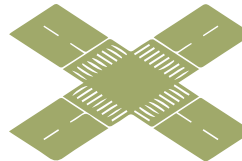
During the planning process, Warrenton visitors and residents voiced their concerns and hopes for walking and bicycling throughout the Town and to other destinations in Warren County. Barriers towards walking and bicycling more included:

This Plan recognizes the benefits of implementing infrastructure, policies, and programs to support bicycling and walking. These benefits include:



Multi-use paths could generate up to \$1.70 in local revenue for every \$1 spent on infrastructure

Promoting physical activity can reduce the likelihood of chronic diseases.



Intersection safety projects that are proven to reduce pedestrian collisions

Increase the share of people who walk and bike to work.



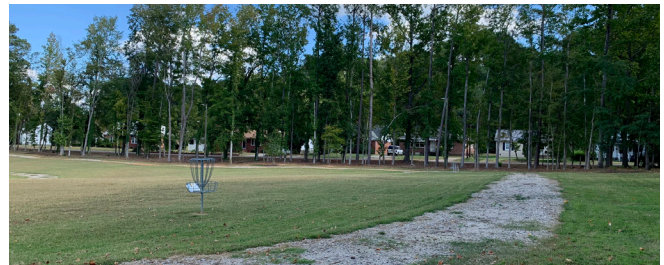
More than **50%** of survey respondents rated Warrenton’s existing sidewalk as Fair or worse.

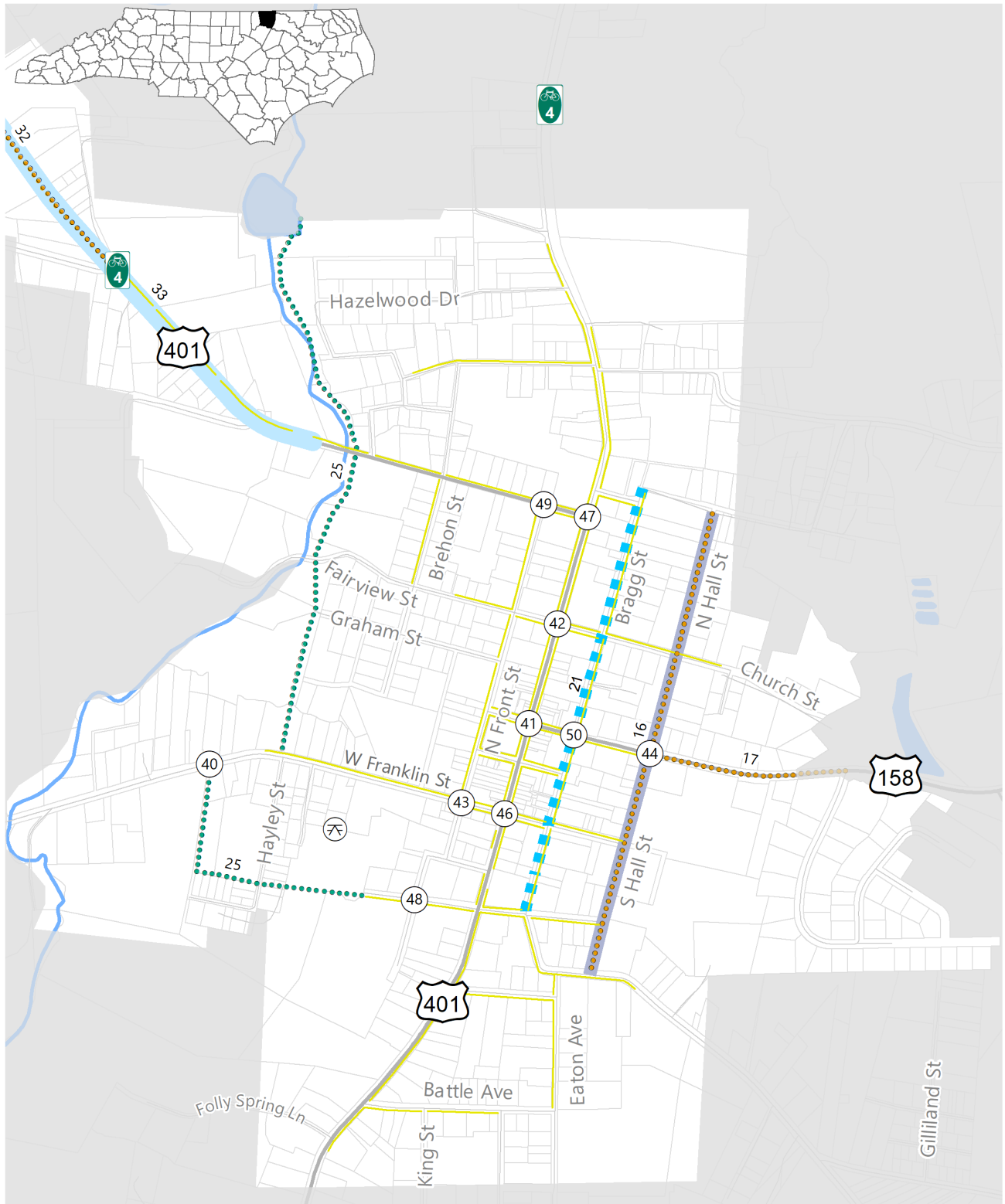
Lack of connected sidewalks & bicycle lanes were among top noted barriers to more active transportation.



35% of survey respondents reported not having a bicycle

No marked crosswalks in Town, and several intersections Downtown were perceived as unsafe.





Bicycle and Pedestrian Plan

Town of Warrenton, NC

Top 15 Recommended Projects

- Crossing Improvements
- Shared-Use Path
- Sidewalk
- Sidewalk - Existing
- Advisory Shoulder
- Buffered Bike Lane and Road Diet
- Shared Lane Marking
- Property Boundary
- Warrenton ETJ

Source Info: NCDOT, NC One Map, VHB

Priority Recommendations

The Plan identified more than 40 projects to improve walking and bicycling in Warrenton. These projects were created through a process that began with identifying the Town’s goals, then mapping priority and secondary networks, and creating projects to match the Town’s mobility and safety needs. Finally, all projects were ranked according to criteria developed with the Town that prioritized funding eligibility, safety, and connectivity to the Town’s resources, among other factors. The Top 15 projects are shown in the figure to the right.

The Top 15 projects mirror the Town of Warrenton’s active transportation needs. There are intersection safety projects along the Town’s Main Street, bicycle lanes and sidewalks for the Town’s disconnected eastside, a road diet for a low volume wide road, and a recreational greenway trail that runs north-south that connects important Town assets and avoids truck traffic. Together, these projects will support Warrenton as a safer and more enjoyable place to walk and bike.

Criteria, rankings, and estimated planning-level costs are included in Section 3.4 of the Plan. Six of the Top 15 projects were selected as Pilot Projects based on their impact and prominence in the plan. These Pilot Projects feature illustrations and additional details on implementation, and they are shown in Section 3.5.

Implementation

Successful implementation of the Plan will require the cooperation of several agencies and organizations. These include the local and regional partners like the Town of Warrenton, Warren County, and the Kerr-Tar Rural Planning Organization, as well as state and federal support from NCDOT Division 5, the NCDOT Division of Integrated Mobility, and the FHWA.

Not all of the Plan’s recommendations should be implemented simultaneously. There are certain steps, such as adoption of the plan, that should occur before projects are constructed or new educational programs are conducted. These recommended implementation steps, their champions and frequencies are detailed in Section 5.



Table of Contents

Introduction.....	2
Project Background.....	3
Project Goals and Objectives	3
Plan Components	4
Planning Process.....	9
Current Conditions	12
Local Context	13
Public Input.....	19
Existing Institutional Framework	25
Related Plans and Initiatives	25
Recommended Facilities.....	27
Overview.....	28
Key Inputs and Recommendations.....	28
Priority Corridors	28
Facility Recommendations.....	30
Recommended Programs and Policies	47
Overview.....	48
Existing Programs.....	48
Program Recommendations and Resources	49
Policy Recommendations.....	59
Implementation Plan.....	64
Implementation Overview.....	65
Organizational Framework for Implementation.....	65
Implementation Action Steps.....	67
Performance Measures.....	71
Funding Sources	72
Appendix A: Guidelines and Facilities.....	A1
Appendix B: Funding.....	B1
Appendix C: Public Input.....	C1

List of Figures

Figure 1. Existing Conditions	5
Figure 2. Warrenton's Existing Roadway Infrastructure.....	8
Figure 3. Existing Traffic Volumes.....	15
Figure 4. Community Features.....	18
Figure 5. Bicycle and Pedestrian Crashes.....	20
Figure 6. Community Destinations.....	21
Figure 7. Community Workshop #2	23
Figure 8. Public Rating of Existing Pedestrian Network	24
Figure 9. Public Rating of Existing Bicycle Network.....	24
Figure 10. Noted Barriers to Walking and Biking.....	24
Figure 11. Priority Corridors.....	29
Figure 12. Recommended Projects.....	31
Figure 13. Recommended Pedestrian Projects	32
Figure 14. Recommended Bicycle Projects.....	33
Figure 15. Top 15 Recommended Projects	39
Figure 16. Pilot Project #40.....	41
Figure 17. Pilot Project #25.....	42
Figure 18. Pilot Project #41	43
Figure 19. Pilot Project #16	44
Figure 20. Pilot Project #17	45
Figure 21. Pilot Project #33	46

List of Tables

Table 1. Demographics Comparison.....	14
Table 2. Pedestrian and Bicyclist Crash Data Summary (2007-2018).....	19
Table 3. Public Meeting 2 Facility Selection Feedback.....	22
Table 4. Facility Recommendations.....	34
Table 5. Evaluation Criteria.....	36
Table 6. Evaluation Results.....	37
Table 7. Four E's Recommendation Overview.....	62
Table 8. Plan Implementation Action Item Timeline.....	70



1 Introduction

The Town of Warrenton Bicycle and Pedestrian Master Plan (“the Plan”) provides guidance for the Town, North Carolina Department of Transportation (NCDOT), and other local and regional stakeholders in developing improvements to its bicycle and pedestrian infrastructure, programs and policies. The Plan serves as a decision-making tool to assist leaders in prioritizing, funding, and implementing projects. The Town should evaluate and update this Plan over time.

1.1 Project Background

In 2018, NCDOT awarded the Town of Warrenton a grant from its Bicycle and Pedestrian Planning Grant Initiative. Instituted in 2004, the grant encourages local communities to develop comprehensive bicycle and pedestrian plans. The program is open to all municipalities, as well as counties with populations of less than 50,000 in North Carolina. NCDOT's Division of Integrated Mobility administers the program, and it has allocated over \$6 million to over 200 North Carolina communities as of August 2019.

This plan is intended to provide a framework for identifying bicycle and pedestrian needs, both in terms of physical infrastructure and encouragement programs. The opportunities and challenges identified in this plan will match the content standards set by NCDOT's Division of Integrated Mobility regarding the Planning Grant Initiative. The project recommendations outlined in this document will be eligible for inclusion in local Comprehensive Transportation Plans (CTP) and project prioritization.

1.2 Project Goals and Objectives

The vision for this comprehensive bicycle and pedestrian plan is:

Warrenton is a friendly, diverse, charming, and economically vibrant community that embraces the best of both small-town life and of our interwoven histories while engaging the future. This plan will focus on mobility, safety, health, economy, and the environment to create a network of bikeways and pedestrian walkways for residents and visitors alike.

Building on this Vision, the Steering Committee adopted the following Goals and Objectives for the Plan:

1. Plan for interconnected, safe, pedestrian and bicycle networks
2. Engage the public to identify possible barriers to non-automotive travel
3. Support the Town as a destination for bicycling and walking
4. Identify opportunities for new or improved small public places
5. Ensure the integration of past and ongoing planning recommendations

This Plan heavily prioritizes public involvement in the planning process to identify potential barriers to walking and/or bicycling as well as opportunities to connect destinations that are important to the community. Additionally, this Plan builds upon the existing plans and documentation pertaining to the Town. Using these projects as a foundation for further analysis, this master plan will consolidate the existing work by the County, the KTCOG, National Park Service, and the State to continue building a more vibrant and livable Warrenton.

1.3 Plan Components

This Plan assists the Town in moving from the planning stage into implementation. To do so, it establishes a clear purpose (Section 1), assesses current conditions (Section 2), recommends facility improvements (Section 3), includes program and policy recommendations (Section 4), and outlines a plan for implementation (Section 5). Appendices include a summary of facility types and guidelines, potential funding sources, proposed infrastructure projects, and public comments received by the project team.

1.3.1 Why this Plan is Important

A walkable and bikeable community offers residents the choice of active transportation over traditional motorized transportation. Connecting existing facilities, limiting the physical and psychological barriers that may be preventing people from walking or cycling, and creating a more safe and appealing space for public interaction is the next step.

Through this Plan and its process, the Town hopes to:

- Promote a culture of active living through encouraging walking and cycling.
- Enhance access to local businesses, neighborhoods, schools, local and county-wide recreational assets.
- Emphasize the safety of pedestrians and cyclists while accommodating motorized traffic in an efficient manner.
- Create an aesthetically attractive environment that will appeal to residents and visitors.
- Develop a framework to update this Plan in the future.

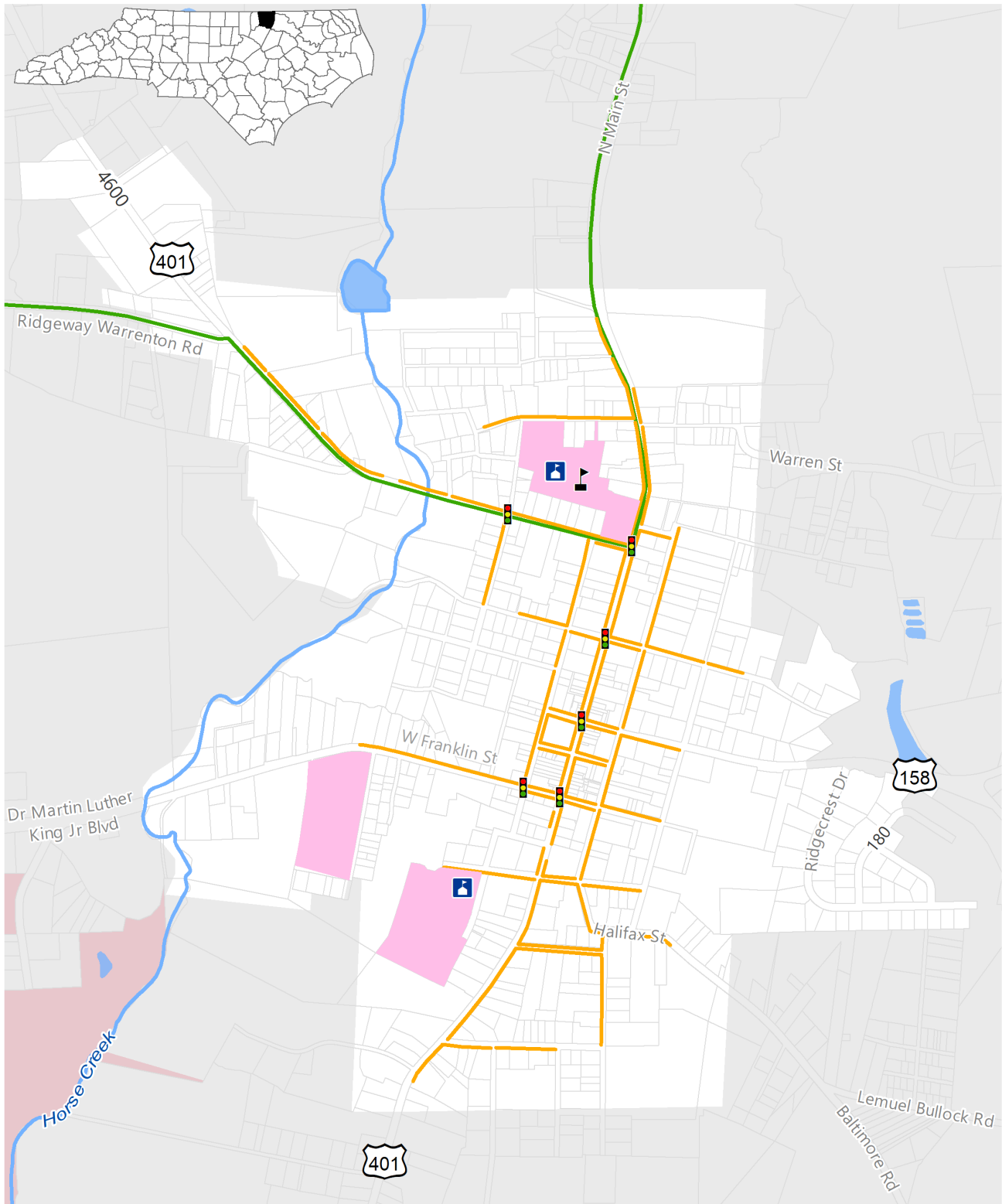
In addition to the specific goals set forth, there is a spectrum of tangible benefits for a municipality that chooses to prioritize active transportation. These include, but are not limited to, accessibility to local destinations from residential neighborhoods, safer roads for residents as well as students, and a healthier, more active community.

1.3.2 Accessibility

Improving accessibility to local destinations by foot or wheel and reducing the dependence of many residents on a motor vehicle is a top priority. To do this, many higher-trafficked corridors will need dedicated pedestrian and/or cyclist facilities installed along the roadside or along parallel routes, and safety countermeasures will need to be installed for safe crossing locations. These will be especially important along Main St between Church St and W Franklin St, W Franklin St at Hayley-Haywood Park, E Macon St, and N/S Hall St. A detailed map of the existing bicycle and pedestrian facilities can be found in Figure 1.



FIGURE #1



Bicycle and Pedestrian Plan

Town of Warrenton, NC

- Stream
- Public School/Park Property
- Traffic Signal
- Waterbody
- State Owned Lands
- Existing Sidewalk
- Property Boundary
- Warrenton ETJ
- NC Bicycle Route 2

Source Info: NCDOT,
NC One Map,
Town of Warrenton,
VHB

Many residential neighborhoods beyond downtown’s Main Street lack dedicated sidewalk facilities, and there are no bicycle facilities within the Town. This is further complicated by financial and physical constraints for new infrastructure, such as above-ground utilities, narrow rights-of-way, and roadside drainage ditches. An essential aspect of this Plan is providing dedicated corridors for pedestrians and cyclists to travel from their residences to downtown, parks, the library, schools, and convenience stores without the need to walk or bike within the roadway.

1.3.3 Safety

From a national perspective, pedestrian and bicycle fatalities have increased both in number of fatalities and proportion of all traffic fatalities in recent years. Pedestrian and bicyclist fatalities in the United States rose by 35 and 9 percent, respectively, from 2008 to 2017, even though total traffic fatalities declined nearly 1 percent during the same time period.¹ According to the Pedestrian and Bicycle Information Center (PBIC), 5,977 pedestrians and 783 bicyclists were killed in collisions with motor vehicles in the United States in 2017. These trends underscore the need for safety improvements to protect these vulnerable users through active safety-focused planning and programming.

Roadways that lack sidewalks indirectly encourage pedestrians to walk with vehicular traffic, leading to potentially unsafe conditions. Likewise, the absence of adequate crossing facilities along certain corridors within Warrenton may force pedestrians to cross at unsafe intersections or mid-block locations. Bicycle and pedestrian facilities will provide easier and safer access to elderly, non-driving, and low-income residents in Warrenton. Section 2.1.4 presents crashes within the Town of Warrenton between 2007 and 2018.

According to Walk Bike NC, North Carolina’s comprehensive plan for walking and bicycling (2012), investments in infrastructure can significantly improve pedestrian safety. The Statewide Ped/Bike Plan cites a 2008 Federal Highway Administration publication that suggests sidewalk installation results in a 65- to 89-percent reduction in pedestrian crashes.² The safety benefits reported not only include collisions with motor vehicles, but other types of injuries as well. Many injuries sustained by pedestrians and bicyclists do not involve a motor vehicle.³ Sufficient infrastructure and routine maintenance help reduce many incidents of tripping or falling.

1. <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812681>

2. https://www.ncdot.gov/bikeped/walkbikenc/safety_post/benefits/

3. http://www.pedbikeinfo.org/data/factsheet_crash.cfm

4. <https://www.cdc.gov/physicalactivity/basics/adults/>

5. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2937005/>

6. <https://itre.ncsu.edu/focus/bike-ped/SUP-Economic-Impacts/>

7. https://www.ncdot.gov/bikeped/walkbikenc/economy_post/benefits-2/

8. <http://www.hendersonvillenc.gov/ecusta-rail-trail-planning-study-economic-impact-analysis>

9. <https://www.ncdot.gov/bikeped/walkbikenc/pictures/EconomyImpact-Analysis.pdf>

1.3.4 Public Health

Choosing to walk or cycle for short trips to and from school, local parks, restaurants, retail stores, or even work is one of the best ways to lead a healthier lifestyle. The Centers for Disease Control and Prevention (CDC) recommends 150 minutes of moderate physical activity per week. Infrastructure and encouragement programs can directly support this physical activity goal.⁴ Additionally, a 2010 study found that communities were more likely to achieve that activity goal and have lower incidences of diabetes and obesity if they tended to commute to work by bicycle or on foot.⁵

By connecting residences with desired destinations, residents feel empowered to walk and bike to complete daily activities for recreation. Social interactions between neighbors are another benefit of being more physically active. Steering Committee members discussed the importance of connecting destinations within Town to county-wide recreational opportunities. This not only contributes to a stronger sense of place, but it also instills civic pride and reinforces the perception that Warrenton is a wonderfully unique place to live and work.

1.3.5 Economic Impacts

Walkability and bikeability can have a positive economic benefit to the local community through indirectly increasing property values, job creation, economic development, and tourism. The Town emphasized the importance of revitalization and reinvestment in its community through its Bicycle and Pedestrian Planning Grant application. A 2018 study by NCDOT found that every \$1.00 of shared-use path construction supports \$1.72 annually from local business revenue, sales tax revenue, and benefits related to health and transportation.⁶ Additionally, WalkBikeNC suggested that a one-time public investment of \$6.7 million in paths and paved shoulders along the Outer Banks has returned \$60 million in annual revenue from tourism and supported 1,400 jobs.⁷ The Ecusta rails-to-trails project in Henderson County, North Carolina was estimated to potentially generate \$50 million in total benefit for the local community based on a \$13.4 million project cost.⁸

Investing in active transportation may also have indirect economic benefits of lowering health care costs, improving safety, and reducing congestion or improving commute times. These benefits stem from lower incidents of chronic disease, reduced injuries from crashes, and fewer vehicle miles driven.⁹ For instance, the American Heart Association estimated that every \$1 spent on building bicycle and pedestrian trails could yield \$3 in savings on medical costs.¹⁰ Additionally, the installation and maintenance of bicycle and pedestrian facilities in low-income areas will both increase access to jobs and services for these residents and provide additional revenues for Warrenton's local merchants and economy. While these are not the most visible results of encouraging active transportation, they are essential in achieving the goal of making Warrenton a more livable community for residents.

1.3.6 Environmental Benefits

Choosing an active transportation option rather than using a traditional vehicle—called mode shift—will reduce vehicular traffic along roadways and shift capacity to sidewalks or bicycle lanes. This moves toward a more efficient use of space in the transportation system. In addition to reduced roadway demand, this shift towards alternative transportation also reduces parking demand. Provision of parking is particularly important for downtowns and environmentally-sensitive areas where impervious surfaces generate the need to manage stormwater runoff. Travel mode shifts also indirectly improve air quality and reduce greenhouse gas emissions. According to the EPA, transportation accounts for roughly a quarter of all greenhouse gas emissions in the United States.¹¹ By allowing for walking or biking for short trips or trip-chaining with public transportation instead of driving, walkable communities can help reduce the number of vehicular miles traveled, and, consequently, vehicular emissions.¹²

Figure 2. Examples of Warrenton's Roadway Infrastructure and Intersections



10. https://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm_301674.pdf

11. <https://www.epa.gov/ghgemissions/us-greenhouse-gas-inventory-report-1990-2014>

12. Gotchi, T. & Mills, K. (2008). Active transportation for America. Rails-to-Trails Conservancy.

1.4 Planning Process

This Plan involved direct input from local stakeholders, collection and synthesis of existing conditions data, and public outreach components. Each of these are described in more detail in this section.

1.4.1 Steering Committee

The project Steering Committee included residents, Town staff, Town police, NCDOT, Kerr Tar COG, National Park Service, and Warren County. The Steering Committee met four (4) times throughout the planning process to discuss goals and objectives, review existing conditions, formulate draft recommendations, and review the Final Plan.

1.4.2 Data Collection, Analysis, and Documentation

Using data collected from previous related projects, available GIS data, and historic and recent crash data, the project team documented and mapped existing conditions. This assessment also included field investigations to confirm physical conditions, photo-document the project area, and observe pedestrian, cyclist, and automobile behavior. The project team presented the existing conditions mapping, as well as preliminary findings and observations, to the Steering Committee and at public events in April 2019 and July 2019, respectively.

1.4.3 Plan Development and Public Involvement

The planning process began with a Kickoff Meeting on January 23, 2019 at the Warrenton Rural Fire Station. The 20-member Steering Committee was asked to provide initial impressions of the active transportation environment in Warrenton and what would help this plan to be successful. The strong community support for a successful bicycle and pedestrian network, and the commitment and dedication of the steering committee were identified as essential to the success of this initiative. The initial Steering Committee Meeting was followed by two consecutive meetings held in April 2019 and July 2019.

In addition to the Steering Committee meetings, there were two public events in April 2019 and July 2019. At these events, the project team gathered observations of existing conditions and engaged the public to identify potential opportunities and obstacles within the Town. Based on these discussions, the project team determined priorities for future bicycle and pedestrian improvement projects and encouragement programs.

At the April 24, 2019 meeting, the project team presented existing conditions, goals and objectives. Attendees identified their typical destinations within Warrenton, pointed out potentially unsafe locations for pedestrians and cyclists, and outlined areas for future improvements. At the July 16, 2019 meeting, the project team presented a draft of priority corridors, as well as project and policy recommendations, and sought feedback during a question, answer, and comment period. The Appendix provides summary documentation of the public comments and themes from this meeting.

In addition to public events, the project team conducted a 20-question survey to gather input from residents. The survey was available online and distributed by steering committee members and at public meetings and was available in English and Spanish (printed version). In total, 136 responses were collected through this 3-month survey.

After a review of the draft report and the project recommendations generated through public engagement and the planning process, a final Steering Committee meeting was conducted on September 24, 2019. Revisions to the plan were incorporated into the final plan. The completed plan was presented to the Town Council for adoption on March 9, 2020.



Two public meetings were held to engage the public to identify potential opportunities and determine priorities for future pedestrian improvement projects and encouragement programs. The first public meeting took place during Warrenton's SpringFest.





The second public meeting took place in September, 2019 at Warrenton's Fire Station on S. Main Street.





2 Current Conditions

A comprehensive Bicycle and Pedestrian Master Plan builds upon and enhances the existing network of sidewalks, paths, and roadway crossing infrastructure. An important first step is to accurately document the current conditions as a benchmark for moving forward.

2.1 Local Context

The Town of Warrenton is a historic community with nearly 950 residents, and it is located in central Warren County, 10 miles south of the Virginia/North Carolina border and 50 miles northeast of Raleigh, NC. The Town's Extra Territorial Jurisdiction (ETJ) has approximately 1,500 residents. The Town is the County Seat for Warren County, and it is served by a network of rural highways with US 401 and US 158 that link the Town to the I-85 and I-95 interstates.

There are a wide variety of natural resources and attractions that make Warrenton an active, healthy place to live and visit. The community has one new park, Hayley-Haywood Park – that boasts a disc golf course, and the Town is exploring another small park on the northwest side of town. Nearby lakes and recreation areas include Kerr Lake (18 miles away), Lake Gaston (16 miles away), and the county's recreational complex (3 miles away). Historic architectural lovers explore the Town's collection of Federal, Greek Revival, and Italianate homes on foot, and the Town's quilting stores and history are widely known and patronized. The Town also features several events encouraging active living such as "Ghostwalks," historical walking tours, Relay for Life, Mountains to Coast bicycle ride support (every 4-5 years), elementary school walking trips, and United Nations Peace Day walk every September 21. Warrenton's largest outdoor event is SpringFest, which celebrates local artists, music, and civic engagement and includes a community 5k run each April.



Warrenton’s downtown street pattern is a highly organized, regularly spaced, urbanized grid. Commercial space is concentrated along Main St and Macon St, while residential is mainly on local streets one or two blocks off Main St and Macon St (Figure 3). The town’s compact network facilitates short walks to shopping and errands in the downtown area. However, walking or biking to areas outside of Warrenton is difficult due to lack of sidewalks, absence of wide paved shoulders, bike lanes, and higher travel speeds along the rural roadways. Roadway speeds within the Town are 20 MPH to 35 MPH but increase to 45 MPH and 55 MPH outside of the Town limits. US 401 and US 158 are the main roadways that connect Warrenton to Louisburg in the south, Norlina to the northwest, and Macon to the northeast. US 401 (West Ridgeway Street) has the highest vehicle volumes with 6,900 vehicles per day, followed by Main St (4,700 vehicles) and US 158 (5,300 vehicles).

2.1.1 Demographics and Mode Share

Since local travel and commuting data is typically unavailable, the next best available dataset is the US Census Bureau’s American Community Survey (ACS) (Table 1). This dataset is a rolling five-year average, indicating that the latest year in the five-year window would only account for 20 percent of the data.

Table 1. Demographics Comparison

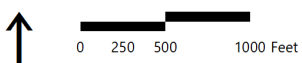
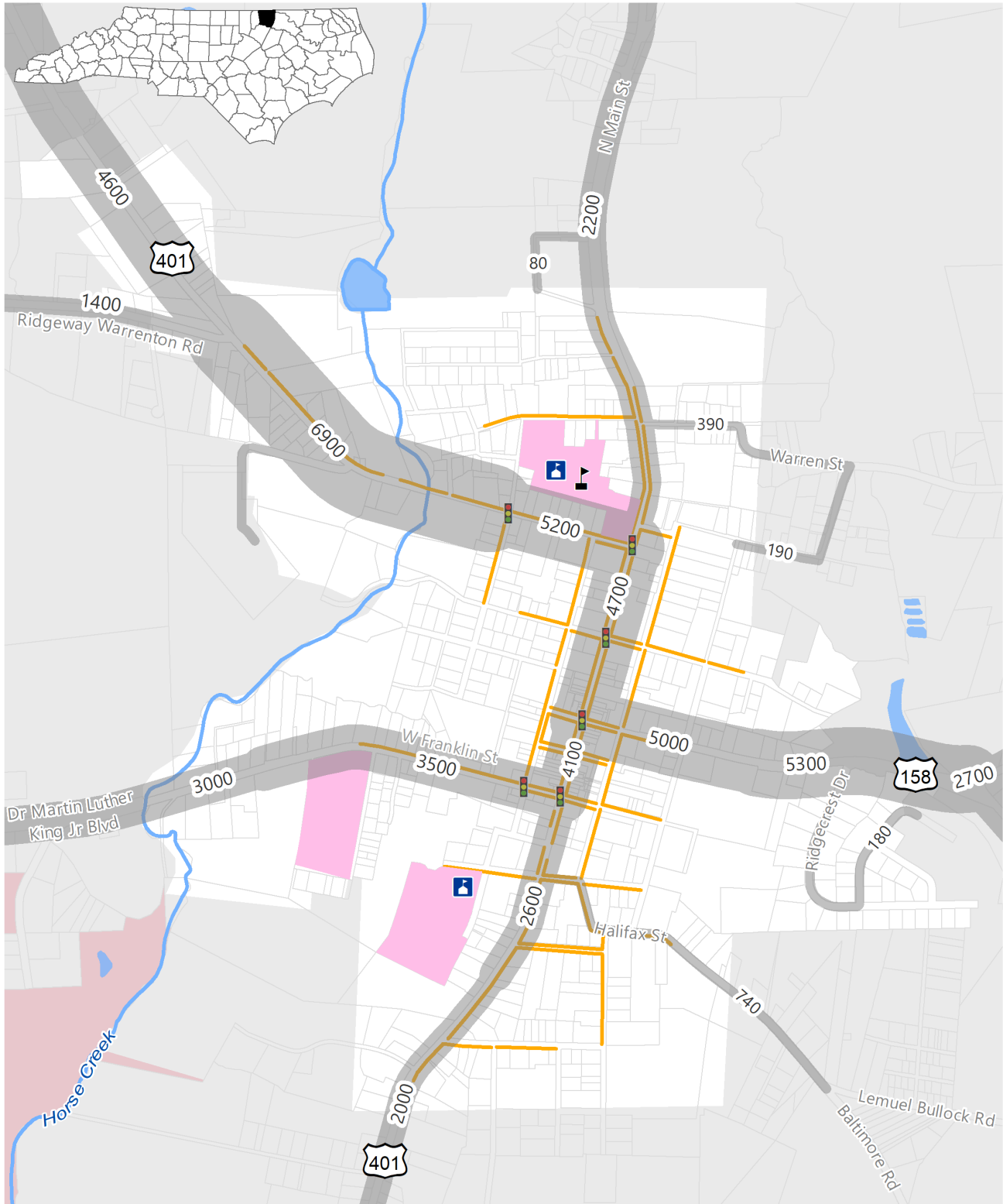
Location	Total Population	Median Age	Median Household Income	Zero-Vehicle Households	% Zero Vehicle Households	% Bike to Work	% Walk to Work
Warrenton	948	53.0	\$19,375	48	10.3%	0%	0.5%
Norlina	1,156	45.9	\$18,512	63	12.4%	0%	0%
Littleton	588	49.8	\$21,042	48	16.2%	0%	0.5%
Maysville	937	34.8	26,563	51	13%	0.0%	5.8%
Hillsborough	7,033	36.6	\$24,622	213	8.9%	0%	0.6%
Edenton	4,800	37.7	\$20,025	399	20%	1.4%	2.9%
Blowing Rock	1,152	60.6	\$31,111	19	3.2%	0%	2.5%
Southport	3,452	55.5	\$26,783	91	7.2%	0%	0.6%
North Carolina	10,052,564	38.4	\$26,482	240,158	6.3%	0.1%	0.8%

Based on the 2013-2017 ACS 5-Year estimates. The ACS uses sample data to estimate these figures. Only trips to work are considered in ACS survey data.

The median age of Warrenton residents (53.0) is above the State average (38.4), but similar to some of its peer communities. This is likely influenced by higher levels of retirees as indicated by the Town’s low labor participation rate for adults 60+. According to the 2013-2017 ACS 5 Year estimates, an estimated 0.5% percent of Warrenton residents walk or bike to work, despite an estimated 10% of households not having access to a car. These data indicate the need for a system that supports residents without access to a vehicle as well as those who already walk to work.



FIGURE #3

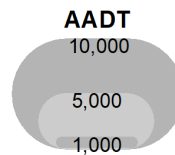


Bicycle and Pedestrian Plan

Town of Warrenton, NC

- Stream
- Public School/Park Property
- State Owned Lands
- Warrenton ETJ
- Waterbody
- Property Boundary

Traffic Signal



Current Conditions Assessment

Source Info: NCDOT,
NC One Map,
Town of Warrenton,
VHB

2.1.2 Opportunities

Warrenton is a close-knit community that is striving to increase recreation opportunities for its residents and visitors and attract new businesses to its downtown. It also benefits from a dense, well connected street network that allows people to efficiently walk or cycle to their destinations. In addition to schools and public parks, there are several popular destinations conveniently located for pedestrians and cyclists in the community (Figure 4). Attractions identified by the community of Warrenton include:

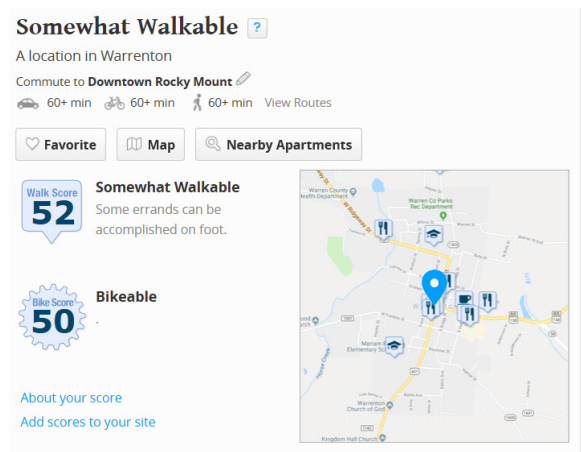
- Downtown area
- Lakes (Lake Gaston and Kerr Lake)
- Hayley-Haywood Park
- Library
- Health Center
- John Graham Center
- Grocery Store (Dollar General and Food Lion in Norlina)
- Mariam Boyd Elementary School
- Governmental Entities (Warren County Courthouse & Town Hall)

These destinations and the Town's existing structure provide a foundation to expand low-stress walking and bicycling in the immediate and ETJ areas.

Existing Sidewalk Network

The urban form of Warrenton is ideal for creating efficient connections between origins and destinations. The direct, dense grid pattern of streets is more conducive to bicycle and pedestrian travel than a more curvilinear street network and block design.

Walk Score is an online service that provides measures of walkability and search tools for apartments and retail businesses. Walk Score helps people find walkable places to live. Warrenton has a Walk Score of 52 (www.walkscore.com), with above average scores for proximity to errands and culture/entertainment venues. This score indicates a community that has some walkable assets, but there are opportunities to improve connectivity between destinations like parks, schools, shopping, and dining locations. While the Town is currently identified as Somewhat Walkable, the compact urban form provides a clear opportunity to increase the walkability and bikeability of Warrenton in areas outside of the downtown core.



2.1.3 Challenges

Warrenton faces challenges to improving and expanding walking and biking. These challenges include funding availability, limited right of way, commercial traffic, lack of a bicycle community, and absence of key community resources such as a traditional grocery store. The Town has a small tax base and—while it has received significant development funds from the State—does not benefit from major scheduled transportation projects that would include bicycle and pedestrian improvements. As a historic place in a rural community, the Town is separated from bikeable destinations like Gaston and Kerr Lake by high speed roads with narrow shoulders that are outside the control of Warrenton. Bicycling itself is not as popular as walking in Warrenton, and the lack of a bicycle community slows the development of encouragement and educational events. Finally, the Town’s main commercial routes, US 401 and US 158, bring commerce and visitors through Warrenton but also generate noise and turning conflicts with pedestrians through the downtown. These challenges force careful consideration of potential improvements against costs and other competing municipal priorities.

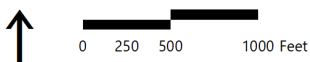
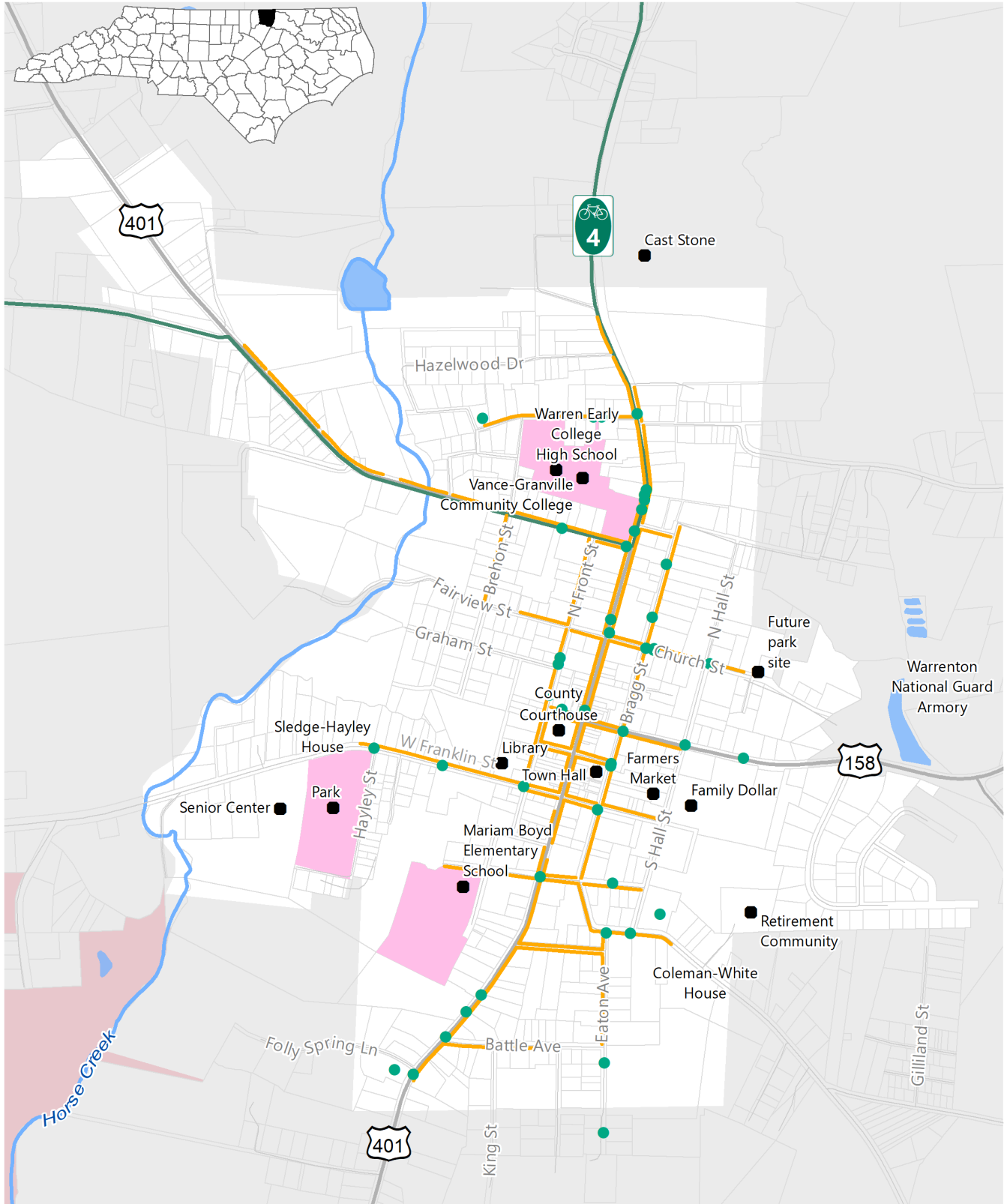
2.1.4 Crash Data

The NCDOT Division of Integrated Mobility provides a database of Bicycle and Pedestrian crashes that have occurred between 2007 and 2016 for the entire state. These data are maintained by the University of North Carolina’s Highway Safety Research Center, which locates crashes and inputs the available data from police department crash reports and supplemental roadway information. During the first Steering Committee, NCDOT provided additional crash data to expand the dataset through 2018.

The police crash reports provide additional detail on the circumstances surrounding the crashes. Analyzing the data helps identify contributing factors and common trends in the crashes. These findings inform decision-makers to consider projects that will target specific contributing factors and trends with the goal to reduce the severity and number of crashes in the future. Table 2 presents a summary of the pedestrian and bicycle crash data.



FIGURE #4



Bicycle and Pedestrian Plan

Town of Warrenton, NC

- | | | |
|---|---|--|
| ● Historic Walking Tour Site | — Stream | Property Boundary |
| ● Community Features | Waterbody | State Owned Lands |
| — NC Bicycle Route | Public School/Park Property | Warrenton ETJ |
| — Existing Sidewalk | | |

Community Features and Destinations

Source Info: NCDOT, NC One Map, VHB

Table 2. Pedestrian and Bicyclist Crash Data Summary (2007 - 2018)

ID*	Month	Year	Severity	Location	Light Conditions	Crash Type
P1	September	2007	B: Evident Injury	Intersection	Daylight	Motorist Turn / Merge – Other / Unknown
P2	December	2008	O: No Injury	Non-Intersection	Daylight	Motorist Left Turn – Parallel Paths
P3	May	2018	C: Possible Injury			Fixed Object

* ID relates to Figure 5 labels

The following observations were made after the crash data analysis:

- Pedestrian crashes are concentrated in the downtown area near roadways with higher vehicle volumes.
- Crash types consist primarily of motorists turning into pedestrians, which may indicate the need to increase pedestrian crossing visibility through markings and assess vehicle turning restrictions at crosswalks.
- The majority of crashes occurred outside of Warrenton in the ETJ at non-intersection locations. Most were pedestrian crashes where the pedestrian was struck walking along the roadway.

2.2 Public Input

Public input from visitors and the residents of Warrenton supplemented the quantitative data gathered by the project team. The public had the opportunity to provide input at two public events, as well as through the public survey. This section summarizes the findings from these comments.

2.2.1 Public Comments on Current Conditions

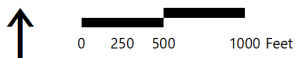
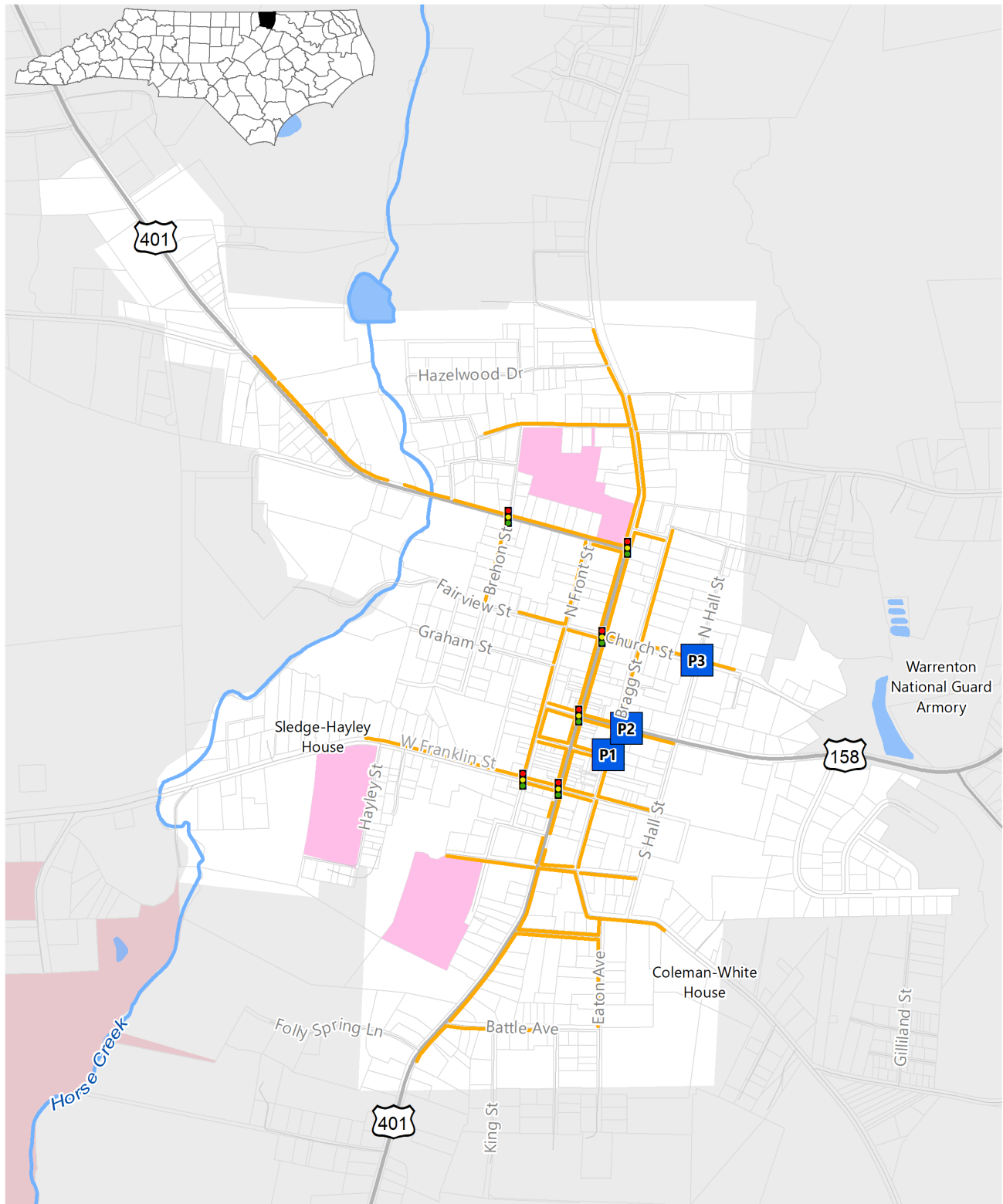
The project team asked Warrenton residents to describe their impressions of the bicycle and pedestrian network in the community. These prompts included where they felt barriers to walking or cycling and where they saw opportunities to improve the Town's accommodation of pedestrians and cyclists. At public events in April 2019 and July 2019, residents showed the project team where they currently walked or cycled in the community, and where they would like to go if there were fewer barriers to pedestrians and cyclists.

Springfest 2019

In April, the project team had a booth at Warrenton's Springfest. During the festival, the team asked visitors about major destinations and barriers. Figure 6 shows green dots where people live and orange dots where people want walk or bike. In addition to destinations, the project team asked residents what barriers stopped them from walking or biking in Warrenton. Many residents mentioned the heavy truck traffic along Main Street, as well as a desire for trails or greenways.



FIGURE #5



Bicycle and Pedestrian Plan

Town of Warrenton, NC

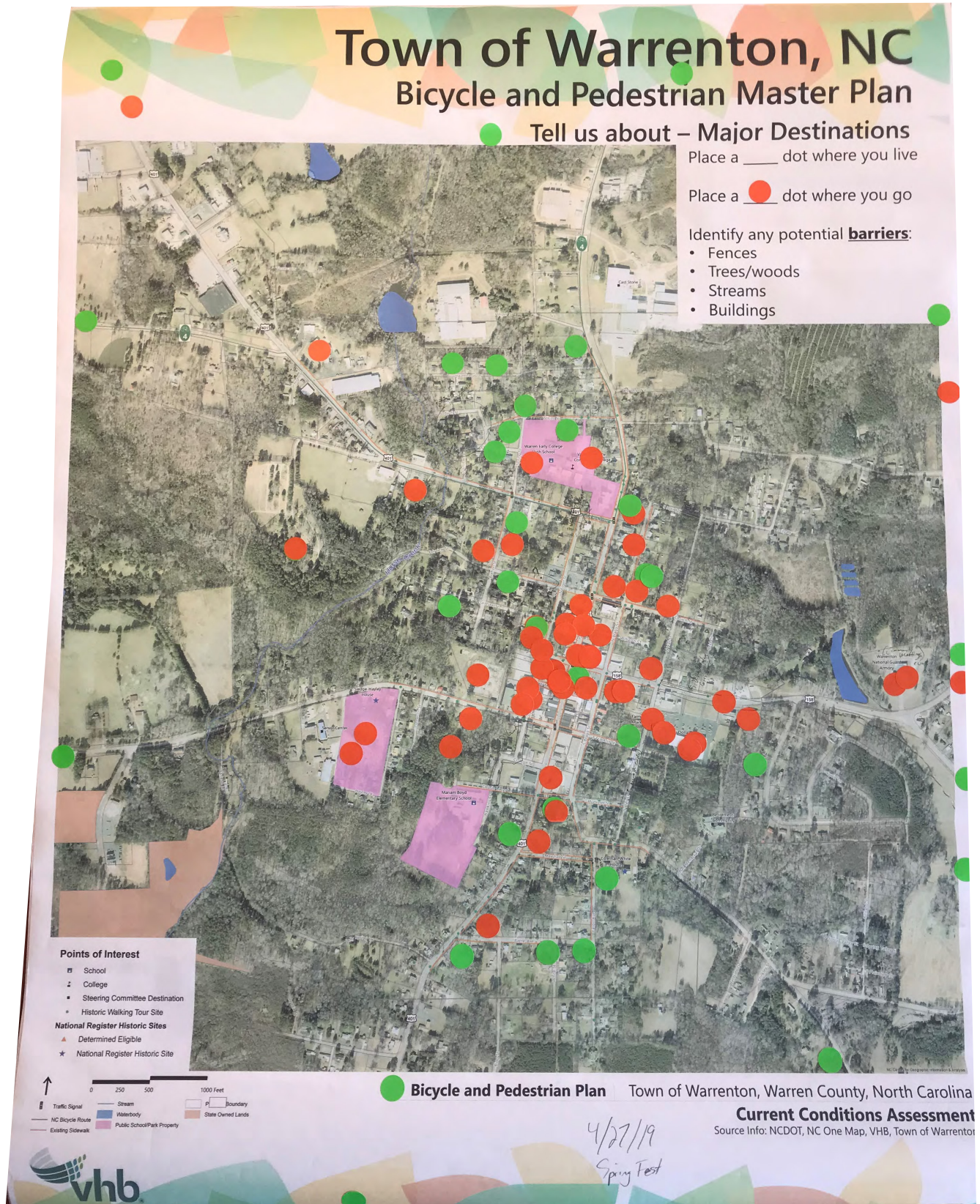
- Pedestrian Crashes
- Existing Sidewalk
- Stream
- Waterbody
- Traffic Signal
- Public School/Park Property

- Property Boundary
- State Owned Lands
- Warrenton ETJ

Pedestrian and Bicycle Crashes

Source Info: NCDOT, NC One Map, VHB

Figure 6. Community Destinations



Public Meeting July 2019

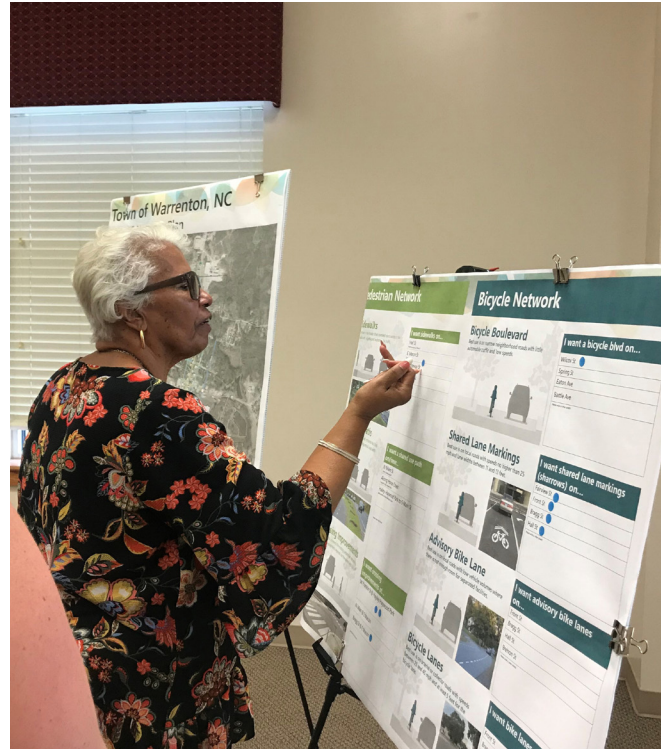
In July, the project team held a formal public meeting presenting on the data collected and a draft bicycle and pedestrian network. Attendees were asked to identify what kind of facility they would like to see on each street or intersection (Table 3). The most popular facilities include a sidewalk on Hall Street, a shared-use path along Horse Creek, and crossing improvements along Macon Street. In addition to identifying preferred facilities, attendees gave feedback on the draft network plan, providing suggestions for additional intersections for improvement as well as alternative locations for a potential shared-use path.

Table 3. Public Meeting 2 Facility Selection Feedback

Facility Type	Location	Votes
Advisory Bike Lane	Bragg Street	4
	Front Street	2
	Hall Street	2
Bicycle Boulevard	Battle Ave	2
	Eaton Ave	2
	Wilcox St	2
	Spring St	1
Bicycle Lanes	W Ridgeway Rd	4
	Bragg Street	1
	Front Street	1
	W Franklin St	1
Crossing Improvement	Bragg St @ E Macon	6
	N Main @ E Macon	6
	Front @ Ridgeway	5
	W Franklin St @ Hayley-Haywood Park	4
	Front @ Franklin	2
Shared Lane Markings	Front Street	3
	Hall Street	3
	Bragg Street	2
	Fairview Street	2
Shared Use Path	Hayley-Haywood Park to S Main St	7
	Horse Creek	6
	N Main St	2
Sidewalk	Hall Street	6
	E Macon St	5
	W Ridgeway St	4
	W Franklin St	3
	Hawkins St	2

In March 2019, a survey was posted online and spread by the project team and Steering Committee members through the Town's utility bill, Town websites, and local media such as the Warren Record. In total, 136 responses were collected through this three-month survey. The volume of responses and interest in the project indicate that residents in Warrenton have a tremendous desire to actively participate in their community.

Figure 7. Community Workshop #2



2.2.2 Public Survey Results

The following charts summarize the results of the public survey, which was open between March and May 2019. Through the survey, the project team and Steering Committee learned that while many respondents walked in Warrenton (82 percent), few reported bicycling in Town (21 percent). This sentiment was reflected in respondents' rating of the sidewalk network as 'Fair', but the bicycle network as 'Not Applicable' (See Figures 8 and 9). There are no formal bicycle facilities in Warrenton.

There were different noted barriers for walking and bicycling in the Town. Survey respondents shared that poor sidewalk maintenance, lack of connected sidewalks, and living too far from destinations were the top three barriers to walking more (Figure 10). The Town recently completed sidewalk leveling and grinding to reduce tripping hazards. Conversely, the noted barriers to bicycling focused on the lack of bicycle lanes, access to a bicycle, and lack of shared-use paths/trails. When asked what would encourage more frequent walking and bicycling, survey takers shared that greenways/shared-use paths, repairing existing sidewalks, and installing bicycle lanes were the most motivating, which both validated the community concerns and vision for a walkable and vibrant Warrenton.

Figure 8. Public Rating of Existing Pedestrian Network

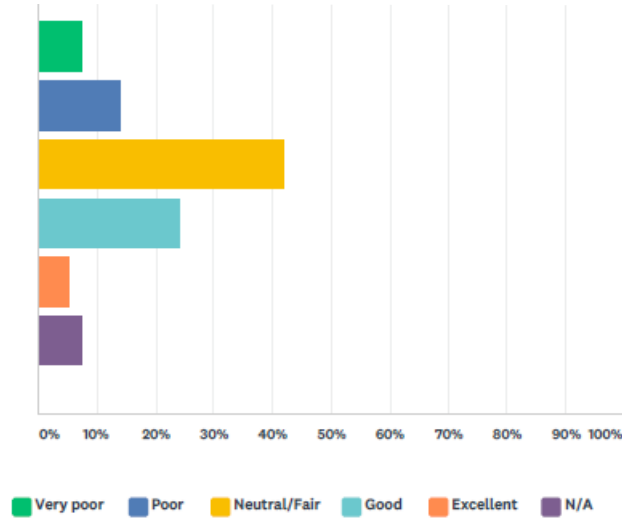


Figure 9. Public Rating of Existing Bicycle Network

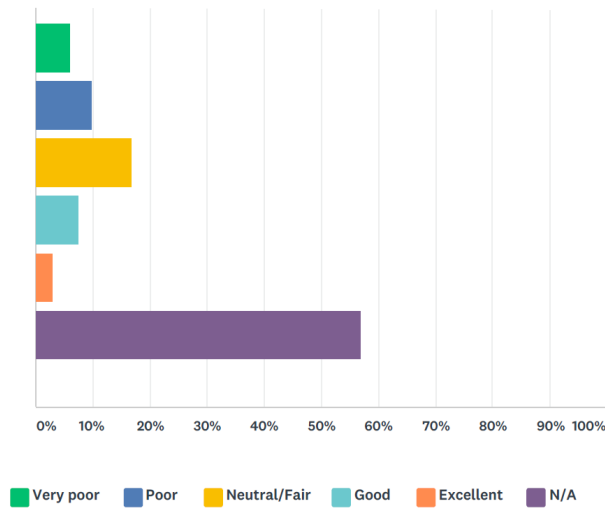


Figure 10. Noted Barriers to Walking and Biking

Barriers to Walking	
Poor maintenance of sidewalks (cracked, separated, or overgrown)	32%
Lack of connected sidewalks	28%
Live too far from my favorite destinations	20%
Concern for personal safety/security	18%
Lack of crosswalks	17%
Unsafe vehicular traffic/speed	15%
None; I walk often	14%

Barriers to Biking	
Lack of bicycle lanes or shared lane markings	40%
I do not own a bicycle	35%
Lack of multi-use paths/trails	29%
Live too far from my favorite destinations	22%
Unsafe vehicular traffic/speed	22%
Unsafe conditions for bicyclists at intersections	17%
Lack of bicycle parking (e.g. bike racks) at destinations	9%

2.3 Existing Institutional Framework

Warrenton is within Warren County, and it is under the planning purview of the KTCOG. Many of the infrastructure projects undertaken in the Town, particularly those related to NCDOT initiatives, are planned through the inter-related Town, County, and KTCOG planning processes. Section 2.4 outlines the most recent and relevant plans guiding planning in Warrenton.

The Town of Warrenton Ordinance Book governs development within the town limits. This document provides regulations for the cost-share of installing new sidewalks and prohibits bicycle riding on sidewalks within the business center, among other regulations. Section 4 of this Plan provides recommendations for improving existing policies to promote consideration and consistent installation of bicycle and pedestrian facilities such as sidewalks, bicycle parking, and easements for greenways.

2.4 Related Plans and Initiatives

In preparation of this Plan, the project team reviewed relevant past plans developed by the Town and other similar agencies. This section summarizes the important information in those plans.

Warren County Comprehensive Transportation Plan (2010)

The Warren County CTP identifies the existing on-road bike route along North Carolina Bicycle State Route 4 that comes into town on W Ridgeway Street and exits along N Main Street.¹ It is identified as an existing on-road facility that does not need improvement. Additionally, the CTP identifies a recommended boulevard and corresponding bicycle route that would bypass Warrenton, connecting US 401 to Ridgeway Road.

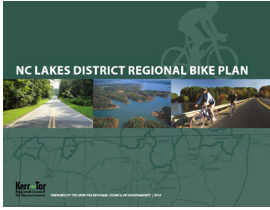
Warren County Parks & Recreation Comprehensive Master Plan (2019)

The Warren County Parks & Recreation Comprehensive Master Plan identifies a series of recommendations to improve the current network of facilities. The Warren County Recreation Complex is two miles north of Warrenton, it is identified as the most popular facility, and a 45-acre addition for recreational use is planned. The facility analysis and extensive public involvement for this plan showed a deficit in paved trails in Warren County, concluding in a recommendation to construct 17 miles of greenway, natural surface, and mountain bike trails.

Warren County National Park Service Trails Planning (2017 – Ongoing)

Warren County is completing a Community Assistance grant from the National Park Service to help develop a pedestrian and bicycle plan for the entire county. One of the grant's objectives is to create transportation routes that will feature the county's natural resources such as creeks and forests that are on the Town's perimeter.





North Carolina Lakes District Regional Plan (2015)

The North Carolina Lakes District Regional Plan contains a set of bicycle route recommendations throughout the Kerr-Tar counties (Person, Granville, Vance, Warren, and Franklin).² The plan recommends a Town-to-Lake bike route through Warrenton, following the current State Bicycle Route 4 (W Ridgeway Street to N Main Street) as well as going south on Main Street to Halifax Street connecting Warrenton to nearby towns by bicycle. Recommended facilities along these routes are 4' to 6' paved shoulders with the exception of the section on West Ridgeway Street, which calls for either a Shared Lane Marking or Bike Lane.



Warrenton Downtown Streetscape Master Plan Report (2017)

The Town completed a streetscape master plan for the downtown area that was intended to guide improvements and support future grant applications. One of the plan's primary goals was to provide multiple forms of access through downtown for bicycles and pedestrians. The plan recommended streetscape improvements along Main St such as pedestrian signal heads, crosswalks, sidewalks, ADA improvements, and steel bollards to prevent trucks from encroaching onto the sidewalk at E Macon St. Bicycle recommendations included connecting Hayley-Haywood Park to the downtown with Shared-Lane Markings and parallel bicycle routes along Front St and Bragg St to avoid heavy vehicle traffic on Main St. Finally, the plan opposed the US 401 bypass that was included in the 2010 Warren County CTP due to the likely decrease in vehicles passing through the Town and the associated economic activity.

1. https://www.ktrpo.com/uploads/1/3/8/1/13819061/warrenco_ctp_2010.pdf
2. http://www.nclakesdistrict.com/uploads/1/3/7/5/13754944/reduced_combined_nclcd_draftbikeplan_8-4-15.pdf
3. www.warrenton.nc.gov/upload/page/0006/2017.03.10_Warrenton%20Downtown%20Streetscape%20Master%20Plan%20-%20Final%203-22-17.pdf



3 Recommended Facilities

This section outlines the infrastructure recommendations intended to promote the development of a coherent and navigable network for a sustainable active transportation network. It also outlines the planning process and bicycle/pedestrian facilities available to the Town, as well as provides guidance for planning and implementation.

3.1 Overview

Input from the public and Steering Committee assisted in prioritizing the most important opportunities for the Town and determined the most relevant projects to meet the Town's near-term needs. These recommendations will serve to enhance an already active community that can safely and conveniently access its daily and recreational needs.

3.2 Key Inputs and Recommendations

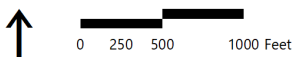
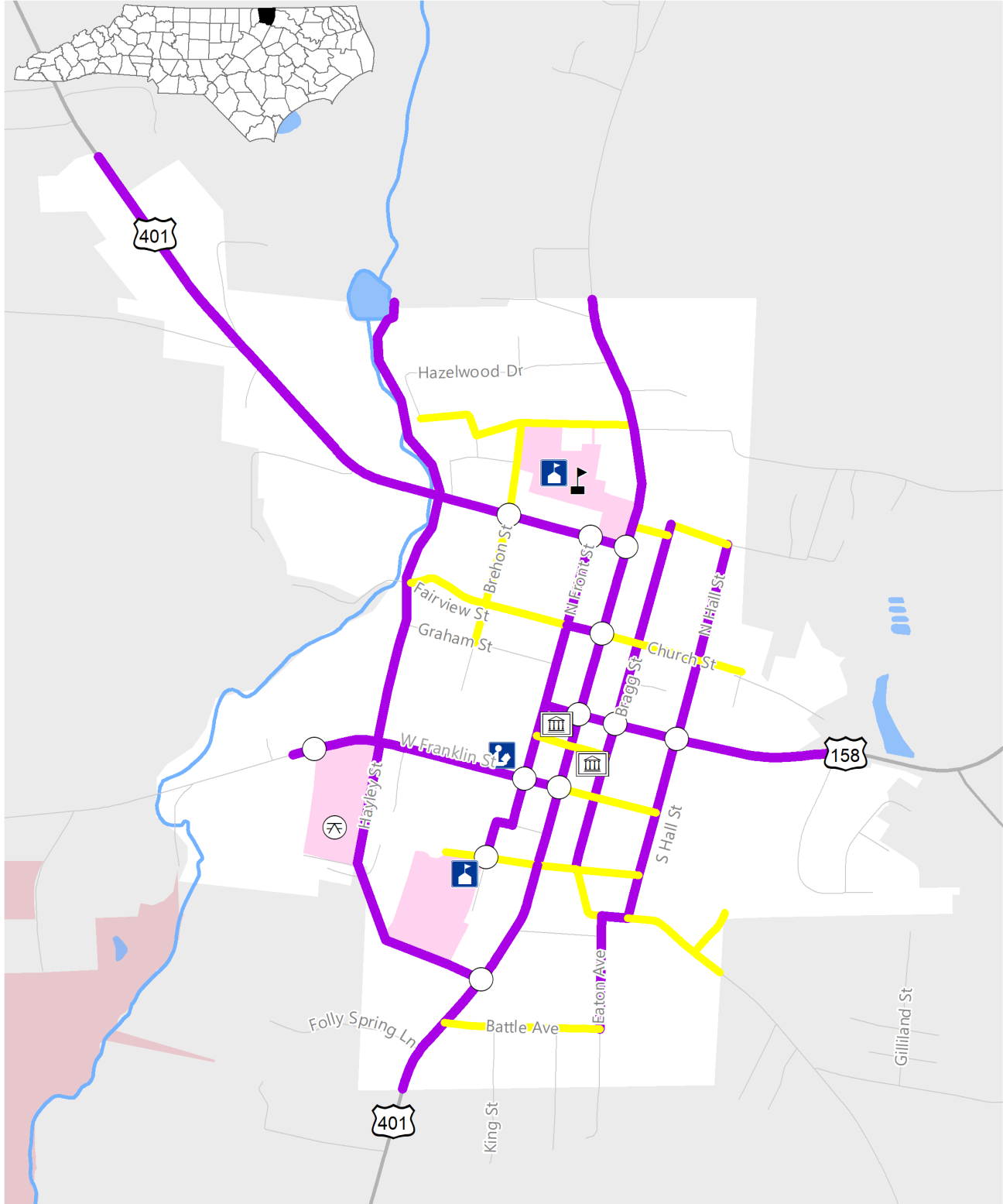
The core inputs for the development of project recommendations included the identification of priority corridors, creating evaluation criteria, generating projects, and then scoring those projects. These steps and the results are explored below

3.3 Priority Corridors

Priority corridors are the framework around which individual project recommendations were developed. These serve as the trunk of the network, with secondary corridors branching out and filling in neighborhood communities. Priority corridors (purple lines on Figure 11) represent the most direct routes between residents and desired destinations and were identified as having conditions suitable for near-term facility construction. Secondary corridors (yellow lines) support the primary corridors, though they may not form a complete network. These are the corridors future iterations of the Warrenton Bicycle and Pedestrian Plan should consider for improvement.



FIGURE #11



Bicycle and Pedestrian Plan

Town of Warrenton, NC

- Intersection Improvement (Proposed)
- Primary
- Secondary
- State Owned Lands
- Warrenton ETJ

Priority Corridors

Source Info: NCDOT, NC One Map, VHB

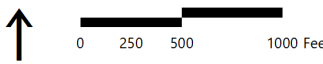
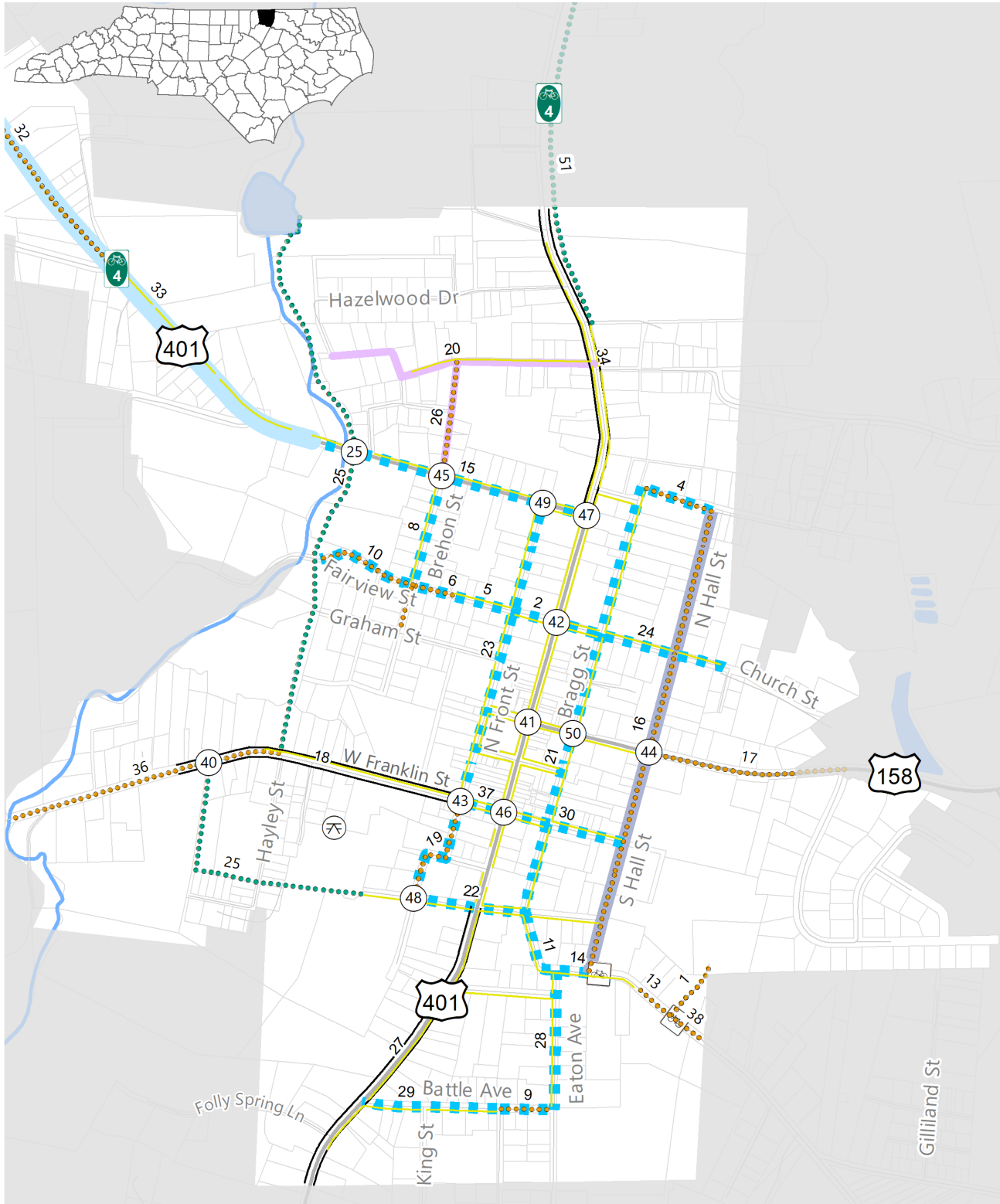
3.4 Facility Recommendations

This section outlines the final list of recommended infrastructure projects. These projects have been scored and ranked according to a set of evaluation criteria described in the following section. Figure 12 maps these projects, and Table 4 provides additional project details. Figure 13 and Figure 14 illustrate the Plan's recommendations for pedestrian and bicycle facilities, respectively. The project team applied an iterative process involving stakeholder direction, geographic distribution, significant destinations, the existing pedestrian network, and priority corridors to identify these projects.

Several of the facility recommendations include both near and longer-term recommendations. Near-term recommendations address improvements that are compatible with the existing roadway cross section (i.e. width) or anticipated improvements while meeting the needs identified during the planning process. The longer-term recommendations are possible when a roadway is widened or otherwise significantly modified so that it may include a new dedicated facility (i.e. bicycle lane). Where there are distinctions between project timelines, planning level costs detailed in Section 3.4.2 are for near-term recommendations.



FIGURE #12



Bicycle and Pedestrian Plan

Town of Warrenton, NC

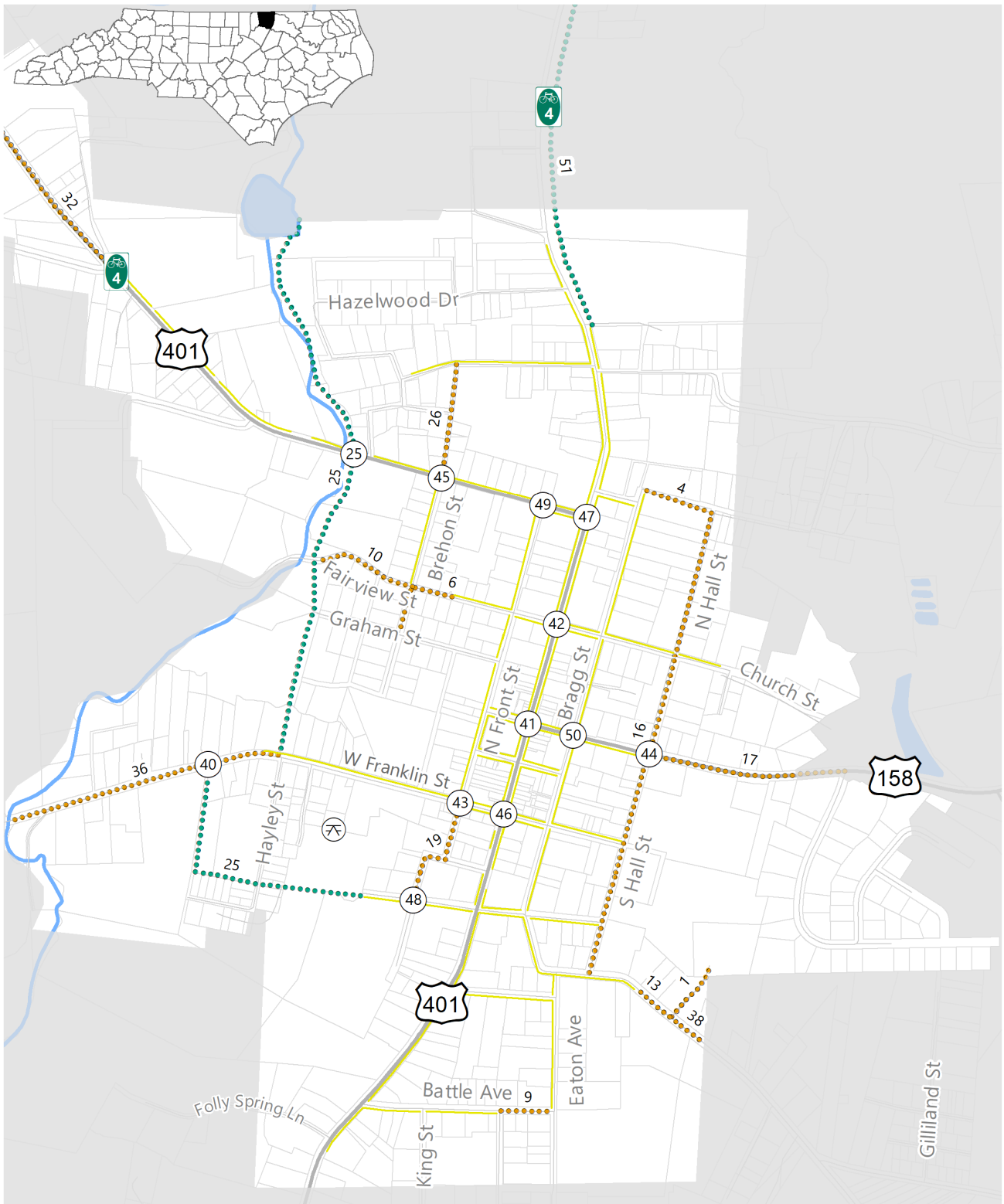
- | | | | | | |
|--|-----------------------|--|----------------------------------|--|-------------------|
| | Crossing Improvements | | Advisory Shoulder | | Property Boundary |
| | Shared-Use Path | | Bicycle Boulevard | | Warrenton ETJ |
| | Sidewalk | | Buffered Bike Lane and Road Diet | | |
| | Signage | | Paved Shoulder/Bike Lane | | |
| | | | Shared Lane Marking | | |
| | | | Sidewalk - Existing | | |

Recommended Projects

Source Info: NCDOT, NC One Map, VHB



FIGURE #13



Bicycle and Pedestrian Plan

Town of Warrenton, NC

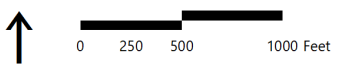
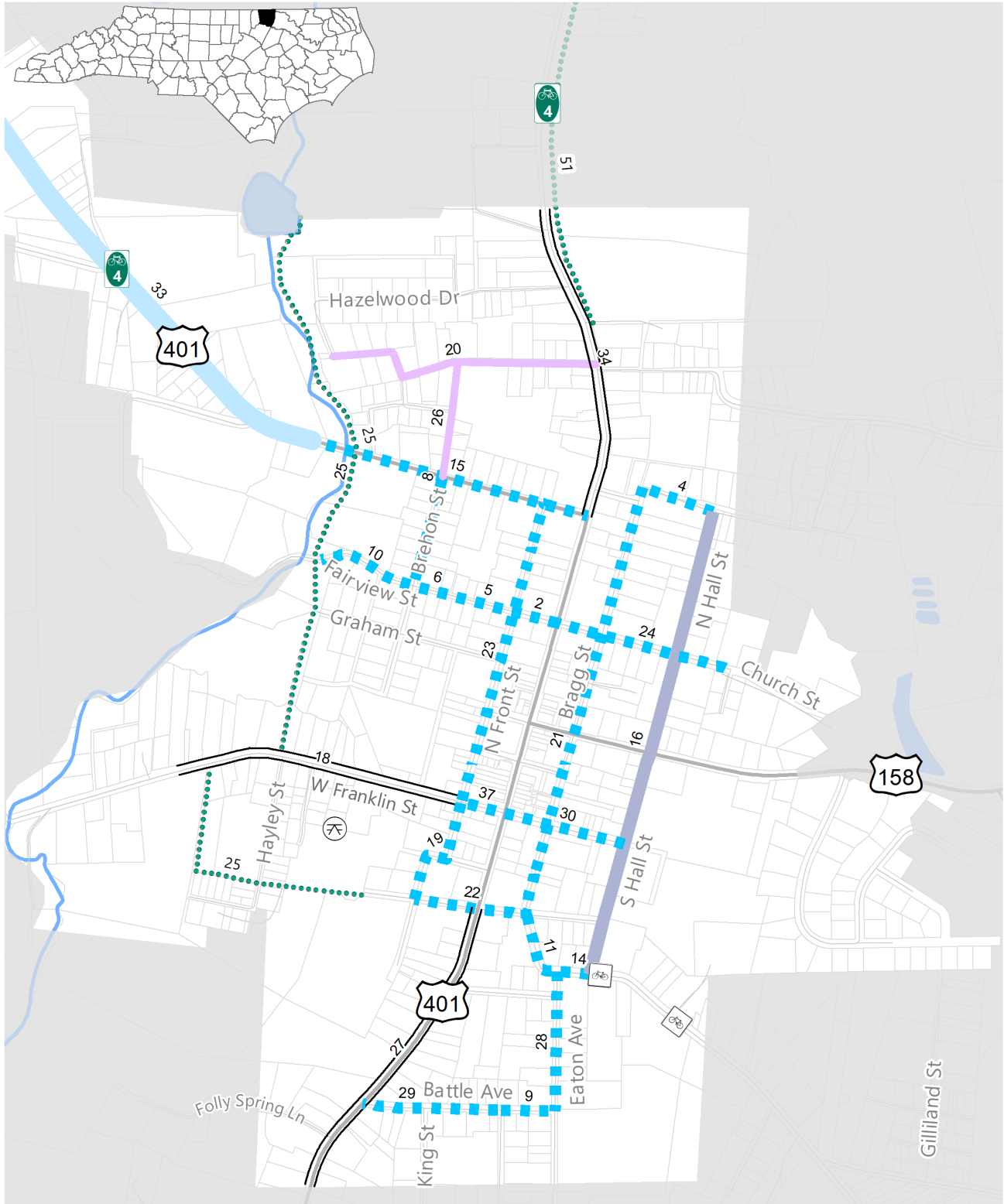
Recommended Pedestrian Projects

- ↑
- 0 250 500 1000 Feet
- Crossing Improvements
- Shared-Use Path
- Sidewalk
- Sidewalk - Existing
- Property Boundary
- Warrenton ETJ

Source Info: NCDOT, NC One Map, VHB



FIGURE #14



Bicycle and Pedestrian Plan

Town of Warrenton, NC

- Shared-Use Path
- 🚲 Signage
- Advisory Shoulder
- Bicycle Boulevard
- Buffered Bike Lane and Road Diet
- Paved Shoulder/Bike Lane
- Shared Lane Marking
- Property Boundary
- Warrenton ETJ

Recommended Bicycle Projects

Source Info: NCDOT, NC One Map, VHB

Table 4. Facility Recommendations

Map ID	Type	Name	From	To	Length (ft)	Improvement Description
1	Roadway	Hall Memorial Dr	Halifax St	End of road	403	Sidewalk - one side
2	Roadway	Fairview St	Front St	Main St	286	Shared Lane Marking
4	Roadway	E Bute St	Bragg St	N Hall St	477	Sidewalk - one side and Shared Lane Marking
5	Roadway	Fairview St	Brehon St	N Front St	393	Shared Lane Marking
6	Roadway	Fairview St	Brehon St	Horse Creek	274	Sidewalk - one side and Shared Lane Marking
7	Roadway	Brehon St	Fairview St	Graham St	318	Sidewalk - one side
8	Roadway	Brehon St	W Ridgeway St	Fairview St	725	Shared Lane Marking
9	Roadway	Battle Ave	White Street	Eaton Ave	345	Sidewalk - one side and Shared Lane Marking
10	Roadway	Fairview St	Horse Creek	Brehon St	647	Sidewalk and Shared Lane Marking
11	Roadway	Halifax St	Plummer St	Eaton Ave	460	Shared Lane Marking and signage
12	Roadway	Halifax St	S Hall St	Eaton Ave	329	Signage
13	Roadway	Halifax St	200' west of S Hall St	Hall Memorial Dr	291	Sidewalk - one side
14	Roadway	Halifax St	Eaton Ave	S Hall St	206	Shared Lane Marking and signage
15	Roadway	W Ridgeway St	Hardees	N Main St	1826	Shared Lane Marking
16	Roadway	Hall St	Bute St	Halifax St	3063	Sidewalk - one side and Advisory Shoulder
17	Roadway	E Macon St	Hall St	Ridgecrest Dr	1272	Sidewalk - one side
18	Roadway	W Franklin St	Hayley St	Front St	1298	Near Term: Restripe edge line for Paved Shoulder Longer-Term: Bicycle Lanes
19	Roadway	Front St & Hawkins St	Franklin St	Cousin Lucy's Ln	800	Sidewalk - one side and Shared Lane Marking
20	Roadway	Wilcox St & Rodwell St	Rodwell St	N Main St	1810	Bicycle Boulevard (wayfinding signage and Shared Lane Markings)
21	Roadway	Bragg St	Bute St	Plummer St	2834	Shared Lane Marking
22	Roadway	Plummer St	S Main St	S Hall St	725	Shared Lane Marking
23	Roadway	Front St	W Ridgeway St	Franklin St	1983	Shared Lane Marking
24	Roadway	Church St	N Main St	Reid Cir	1148	Shared Lane Marking
25	Off-roadway	Horse Creek	Horse Creek Pond	Cousin Lucy's Ln	5458	Shared-Use Path and crossing
26	Roadway	Spring St	Wilcox St	Ridgeway St	738	Sidewalk and signage

27	Roadway	S Main St	Plummer St	Town Limit	2099	Near Term: Restripe edge line for Paved Shoulder Longer-Term: Bicycle Lanes
28	Roadway	Eaton Ave	Halifax St	Battle Ave	895	Shared Lane Marking
29	Roadway	Battle Ave	S Main St	Eaton Ave	888	Shared Lane Marking
30	Roadway	E Franklin St	S Main St	S Hall St	790	Shared Lane Marking
32	Roadway	W Ridgeway St	Town Limit	Ridgeway-Warrenton Rd	1557	Sidewalk - one side
33	Roadway	W Ridgeway St	Town Limit	300' west of Harris Street	3175	Buffered bike lane and road diet
34	Roadway	N Main St	W Ridgeway St	Town Limit	2039	Near Term: Restripe edge line for Paved Shoulder Longer-Term: Bicycle Lanes
36	Roadway	W Franklin St	Town Limit	Hayley St	1788	Sidewalk - one side
37	Roadway	W Franklin St	Front St	S Main St	285	Shared Lane Marking
38	Roadway	Halifax St	Hall Memorial Dr	Town Limit	253	Sidewalk and Signage
40	Intersection	Hayley St @ W Franklin St			N/A	Add crosswalk, advance warning signage, and lighting
41	Intersection	Macon @ Main St			N/A	Add crosswalks on all legs
42	Intersection	Church St @ N Main St			N/A	Add crosswalks on all legs
43	Intersection	Front St @ W Franklin St			N/A	Add crosswalks on all legs with sidewalks
44	Intersection	N/S Hall St @ E Macon St			N/A	Add crosswalk on side with sidewalk and southern legs, add warning signage, curb extensions, and in-street pedestrian crossing sign on uncontrolled approach
45	Intersection	Brehon St @ W Ridgeway Rd			N/A	Add crosswalks, move stop bars backwards
46	Intersection	Franklin St @ S Main St			N/A	Add crosswalks on all legs, move E Franklin St stop bar back
47	Intersection	W Ridgeway Rd @ N Main St			N/A	Add crosswalks, Yield to Pedestrian signage
48	Intersection	Cousin Lucy's Ln @ Hawkins St			N/A	Add crosswalks and warning signage
49	Intersection	N Front St @ W Ridgeway Rd			N/A	Add crosswalks across Front St, treat vegetation

50	Intersection	Bragg St @ E Macon St			N/A	Add crosswalks on all legs and add crossing signage on east/west approaches
51	Off-roadway	N Main St	Old Depot Street	Town Limit	745	Shared Use Path: Located along abandoned railway corridor within Town limits, possible extension to larger trail system outside of Town limits

3.4.1 Evaluation Criteria

The project team identified evaluation criteria for ranking projects during Steering Committee #3. The criteria and weighting were developed through a Steering Committee discussion of the advantages and disadvantages of various quantitative and qualitative methodologies combined with reflection on the Town’s preferred process. The project team and Steering Committee modified the methodology to include seven categories.

The project team and Steering Committee weighted each category according to the priorities and goals of the community. More important factors received a score of 10, while less important factors received 5 or 3. This allowed a maximum of 41 available points for a potential project (Table 5).

Table 5. Evaluation Criteria

Goal	Description	Weight
Funding Eligibility	Initial determination of proposed project’s eligibility for available funding sources, such as through an incidental project within NCDOT’s Complete Streets policy, Powell Bill funds, and federal programs	10 - 0
Community Priority	Identification and intensity of project’s preference from the Warrenton community during the public engagement process	10 - 0
Cost	Relative ranking of the proposed project’s planning level cost (in 2019 \$USD) to the other considered projects. Planning level cost does not include design costs nor Right-of-Way (ROW) acquisition	5 - 1
Connectivity to Network	Evaluation of the proposed project’s connection to an existing sidewalk or bicycle facility (within 100’)	5 - 0
Community Connectivity	Award of points to proposed projects that provided a connection to an identified community resource during the public engagement process; schools and park received the highest scores	5 - 0
Safety	Ranking of the proposed project’s bicycle and pedestrian safety score relative to the list of considered projects (in thirds)	3 - 1
Plan Coordination	Award of points for projects that corridors or at locations where a funded project is planned or scheduled	3 - 0

3.4.2 Project Scoring

Table 6 represents the project evaluation results ranked in descending order of highest to lowest score. It should be noted that these rankings are merely a guide for future planning considerations and not necessarily the exact sequence for implementation. The efficacy of certain projects may be contingent on the implementation of other planned recommendations. Due to the scoring criteria, some projects have tied for rankings. Figure 18 shows the top 15 ranked project recommendations.

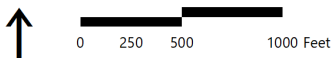
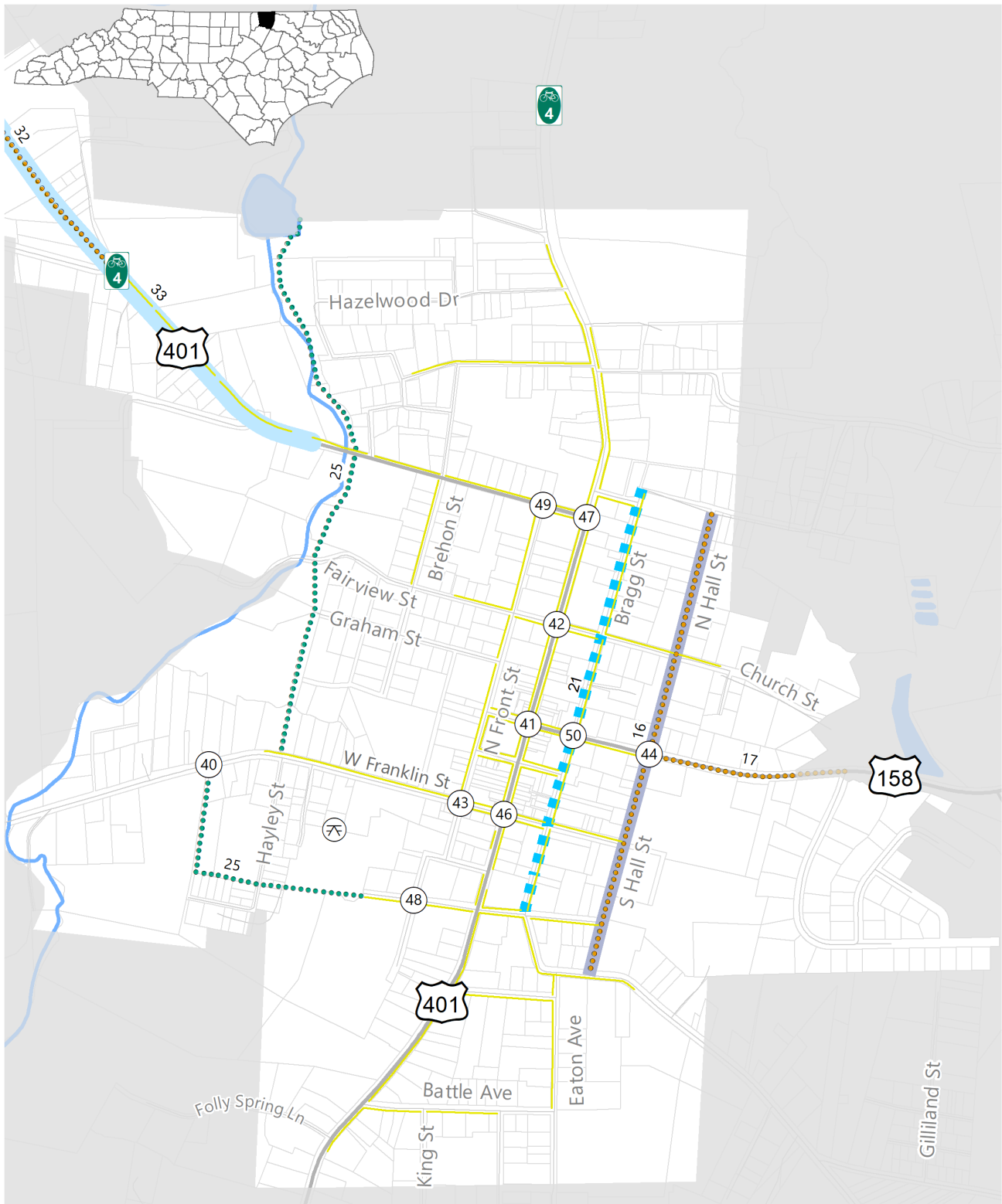
Table 6. Evaluation Results

Map ID	Road Name	Improvement	Score	Ranking	Planning Level Cost (2019 \$USD)
47	W Ridgeway Rd @ N Main St	Add crosswalks and Yield to Pedestrian signage	37	1	6,000
44	N/S Hall St @ E Macon St	Add crosswalk on side with sidewalk and southern legs, add warning signage, curb extensions, and in-street pedestrian crossing sign on uncontrolled approach	34	2	4,000
41	Macon @ Main St	Add crosswalks on all legs	34	2	11,000
49	N Front St @ W Ridgeway Rd	Add crosswalks across Front St and treat vegetation	32	4	3,000
42	Church St @ N Main St	Add crosswalks on all legs	32	4	11,000
43	Front St @ W Franklin St	Add crosswalks on all legs with sidewalks	31	6	11,000
32	W Ridgeway St	Sidewalk - one side	30	7	56,000
17	E Macon St	Sidewalk - one side	30	7	62,000
50	Bragg St @ E Macon St	Add crosswalks on all legs and add crossing signage on east/west approaches	29	9	11,000
48	Cousin Lucys Ln @ Hawkins St	Add crosswalks and warning signage	28	10	1,000
33	W Ridgeway St	Buffered bicycle lanes and road diet	27	11	67,000
16	Hall St	Sidewalk - one side and Advisory Shoulder	27	11	128,000
46	Franklin St @ S Main St	Add crosswalks on all legs, move E Franklin St stop bar back	26	13	11,000
21	Bragg St	SLM	26	13	2,000
40	Hawkins Campus Drive @ W Franklin St	Add crosswalk, advance warning signage, and lighting	25	15	16,000
25	Horse Creek	Shared-Use Path	25	15	563,000
36	W Franklin St	Sidewalk - one side	24	17	85,000

18	W Franklin St	Near Term: Restripe edge line for Paved Shoulder Longer-Term: Bicycle Lanes	24	17	9,000 (Paved shoulder only)
12	Halifax St	Signage	24	17	1,000
22	Plummer St	SLM	23	20	1,000
45	Brehon St @ W Ridgeway Rd	Add crosswalks, move stop bars backwards	22	21	11,000
15	W Ridgeway St	SLM	21	22	2,000
34	N Main St	Near Term: Restripe edge line for Paved Shoulder Longer-Term: Bicycle Lanes	19	23	14,000 (Paved shoulder only)
26	Spring St	Sidewalk and signage	19	23	87,000
14	Halifax St	SLM and signage	19	23	1,000
11	Halifax St	SLM & signage	19	23	1,000
24	Church St	SLM	18	27	1,000
20	Wilcox St & Rodwell St	Bicycle Boulevard	16	32	3,000
19	Front St & Hawkins St	Sidewalk - one side and SLM	18	27	29,000
38	Halifax St	Sidewalk and signage	17	29	10,000
37	W Franklin St	SLM	17	29	250
13	Halifax St	Sidewalk - one side	17	29	10,000
23	Front St	SLM	16	32	2,000
7	Brehon St	Sidewalk - one side	16	32	11,000
6	Fairview St	Sidewalk - one side and SLM	16	32	10,000
27	S Main St	Near Term: Restripe edge line for Paved Shoulder Longer-Term: Bicycle Lanes	14	36	14,000 (Paved shoulder only)
9	Battle Ave	Sidewalk - one side and SLM	14	36	12,000
29	Battle Ave	SLM	13	38	1,000
8	Brehon St	SLM	13	38	1,000
2	Fairview St	SLM	13	38	500
30	E Franklin St	SLM	12	41	1,000
10	Fairview St	Sidewalk and SLM	12	41	76,000
4	E Bute St	Sidewalk - one side and SLM	12	41	28,000
1	Hall Memorial Dr	Sidewalk - one side	12	41	14,000
51	N Main St	Shared Use Path	12	41	75,000
28	Eaton Ave	SLM	11	46	1,000
5	Fairview St	SLM	11	46	300



FIGURE #15



Bicycle and Pedestrian Plan

Town of Warrenton, NC

- Crossing Improvements
- Shared-Use Path
- Sidewalk
- Sidewalk - Existing
- Buffered Bike Lane and Road Diet
- Shared Lane Marking
- Advisory Shoulder
- Property Boundary
- Warrenton ETJ

Top 15 Recommended Projects

Source Info: NCDOT, NC One Map, VHB

Project scoring revealed the following insights:

- Projects along North and South Main St scored higher than projects near the Town limits. This is likely related to the downtown's proximity to key destinations, frequency of crossings, and concerns with turning vehicles (especially trucks and heavy vehicles).
- Bicycle-only projects were not as highly ranked as those that embraced both walking and biking. The Town lacks North/South connections on the west side of Town, which illustrates the preference for facilities like the Horse Creek greenway.
- Fundability was a significant factor in elevating project rankings. As the Town of Warrenton has a small tax base, it has chosen to focus on projects that can be developed concurrently with NCDOT projects at a favorable cost-share or those eligible for State-supported infrastructure improvements. Proposed facilities on non-system roads did not fare well in the evaluation.

3.5 Pilot Projects

This section outlines six general project types recommended by this Plan that were within the top 15 ranked projects. Although the specific context will change between locations, many of the design principles and planning-level guidance will remain consistent. These pilot projects are examples of potential improvements, and will require site-specific environmental, design, and engineering analysis before construction. For all six project cut-sheets, the estimated planning level cost is in 2019 dollars and does not include design costs nor Right-of-Way (ROW) acquisition. The additional costs of design, ROW acquisition, and potential relocation of utilities and other barriers have the potential to significantly increase project costs.

To support further project development consideration, each of the Pilot Projects includes an estimated project cost from the North Carolina Department of Transportation Integrated Mobility's Bicycle and Pedestrian Cost Estimator Tool (BPCE). These estimates in Appendix B include ROW acquisition, construction, and other costs based on past projects from across North Carolina. The estimates are higher than the planning-level estimates that were applied to all facility recommendations.

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FIGURE #16

Project #40: Crossing at Hayley-Haywood Park

This project would create a new crossing across W Franklin Street at Hawkins Campus Drive for pedestrians and bicyclists to access the Hayley-Haywood Park. The connection would include high visibility crosswalk markings, signage, lighting, and curb ramps to safely cross W Franklin Street. The connection would also provide a link between the north and south sections of the Horse Creek Shared Use Path, Project #25. The sidewalk extension on the northside of W Franklin Street from Hayley Street west to the Town Limit is Project #36, the longer-term inclusion of bicycle lanes on W Franklin Street is Project # 18.



Location: Intersection of W Franklin Street and Hawkins Campus Drive	
Length: N/A	
Planning-Level Cost Estimate: \$16,000	
BPCE Estimate: \$30,000	
Amenities: High visibility crosswalk with continental pattern, warning signage, curb ramps, truncated domes, and overhead lighting.	
Constraints: The pilot project is at a location that does not currently have sidewalks. Utilities and trees are located on the south side of the roadway, potentially in the right of way of the proposed sidewalk connections. Private property is located along the north side of the roadway.	
Estimated Unit Costs:	Crosswalk ~ \$2800 each
Curb ramp ~ \$890 each	Lighting ~ \$5400 each
Truncated domes ~ \$46 ft ²	Signage ~ \$330 each

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FIGURE #17

Project #25: Horse Creek Greenway

This project is a new 1 mile shared-use path facility for pedestrians and bicyclists that runs North-South on the west side of Warrenton. The greenway parallels Horse Creek and crosses W Ridgeway Street, W Franklin Street, and ends at Cousin Lucy’s Lane. The path uses a new portion of sidewalk along W Franklin St as an overland connector before transitioning south at the Hawkins Campus Drive crosswalk (Project #40).



Location: Along Horse Creek	
Length: Approximately 1 mile	
Planning-Level Cost Estimate: \$563,000	
BPCE Estimate: \$2,415,000	
Amenities: Paved shared-use path, curb ramps, truncated domes, lighting, signage, and high visibility continental marked crosswalks.	
Constraints: The pilot project is located within a riparian zone, near wetlands on the north section, and passes through private property.	
Estimated Unit Costs:	Lighting ~ \$5400 each
Curb ramp ~ \$890 each	Signage ~ \$330 each
Truncated domes ~ \$46 ft ²	Shared-use path (paved) ~ \$530,000 / mile
Crosswalk ~ \$2800 each	

Location

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FIGURE #18

Project #41: Macon Street at Main Street

This project includes the marking of crosswalks at the intersection of Macon Street and Main Street. The intersection plays a key role in connecting the downtown area with county and town-wide resources. The intersection is also a major junction for regional transportation and local pedestrian traffic.



Location

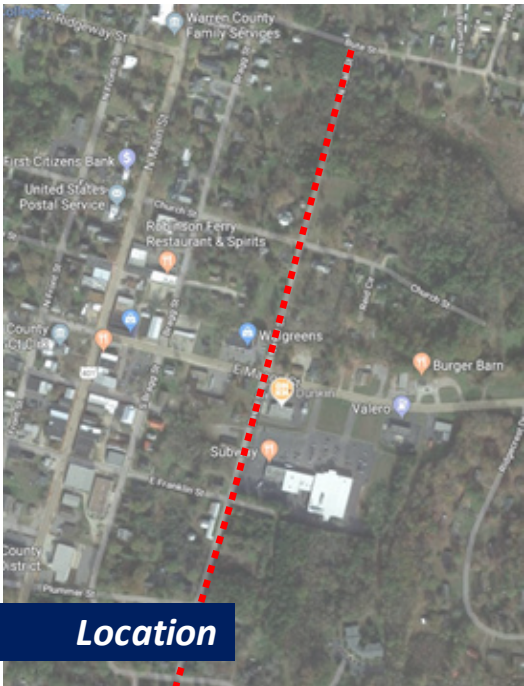
Location: Intersection of Macon Street and Main Street
Length: N/A
Planning-Level Cost Estimate: \$11,000
BPCE Estimate: \$110,000
Amenities: High visibility marked crosswalks across all four legs of the intersection.
Constraints: No constraints are anticipated. The curb ramps are scheduled for ADA-compliance upgrade as part of routine NCDOT maintenance.
Estimated Unit Costs: Crosswalk ~ \$2800 each

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FIGURE #19

Project # 16: Hall Street Sidewalks and Advisory Shoulders

This project includes the addition of sidewalk on one side of Hall Street with advisory shoulders from Bute Street to Halifax Street. The new sidewalk and space for bicycles provides a north/south connection for the residents on the east side of town. The marked crossing at N Hall Street and E Macon Street is a separate project (#44).



Location

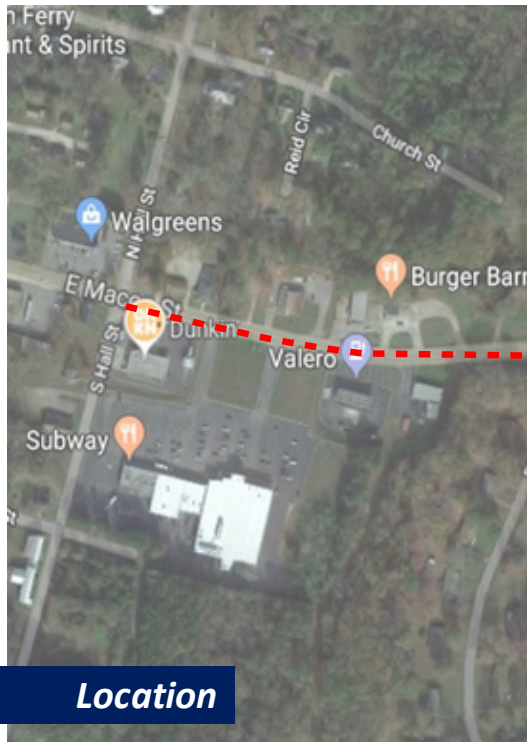
Location: Hall Street from Bute Street to Halifax Street
Length: .5 miles
Planning-Level Cost Estimate: \$164,000
BPCE Estimate: \$1,635,000
Amenities: Sidewalk on one side and advisory shoulder pavement markings on both sides of the roadway. Advisory shoulders create usable shoulders for bicyclists on a roadway that is otherwise too narrow to accommodate one. The shoulder is delineated by pavement markings and optional pavement color.
Constraints: This pilot project has trees and water and sewer on both sides of the roadway throughout the project's length and portions of a small retaining wall on the south east section. Electric utility poles are located along the west side. Location of the sidewalk will be dependent on the least constrained side.
Estimated Unit Costs: Pavement striping ~ \$4 ft Sidewalk ~ \$35 linear ft Curb and gutter ~ \$23 linear ft

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FIGURE #20

Project #17: E Macon Street Sidewalks

This project is the addition of sidewalk on one side of the roadway along E Macon Street from Hall Street to Ridgecrest Drive with curb ramps and high visibility crosswalks across major driveways. The sidewalk provides access to stores and employment centers along E Macon Street and a connection to the neighborhood off of Ridgecrest Drive.



Location

Location: E Macon Street (US 158) from Hall Street to Ridgecrest Drive	
Length: 1,272 feet	
Planning-Level Cost Estimate: \$62,000	
BPCE Estimate: \$345,000	
Amenities: Sidewalk, curb ramps, truncated domes, and high visibility crosswalks.	
Constraints: The pilot project has electric utilities on both sides of the road in the right of way, and the existing interior curb and guard rail on the south side of the roadway may conflict with the needed width of the sidewalk. Curb and gutter ends east of 850' east of Hall St.	
Estimated Unit Costs:	
Sidewalk ~ \$35 linear ft	Truncated domes ~ \$46 ft ²
Curb ramp ~ \$890 each	Crosswalk ~ \$2800 each

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FIGURE #21

Project #33: W Ridgeway Street Road Diet

This project is the reconfiguration of the existing 4-lane section of W Ridgeway Street (US 401) from the Town Limits to 300' west of Harris Street. The conversion to a 2-lane roadway with a center two-way left turn lane and on-street buffered bicycle lanes extends the bicycle network, supports the North Line Trace State Bicycle Route 4, provides motorists safer access to homes and businesses, reduces roadway speeds within the Town, and is compatible with traffic volumes. The extension of the sidewalk to the Town limit is a separate project (#32).



Before



After



Location

Location: W Ridgeway Street (US 401) from Town Limit to 300' west of Harris Street.
Length: 0.6 mile
Planning-Level Cost Estimate: \$67,000
BPCE Estimate: \$4,920,000
Amenities: Buffered bicycle lanes, signage, and road diet. A road diet is the reconfiguration of a roadway with amenities for all modes. This road diet would include a new center two-way left turn lane and buffered bicycle lanes within a three-lane cross section instead of the existing four-lane cross section.
Constraints: This pilot project does not affect areas outside of the existing curb and gutter. Anticipate questions from business owners and residents on access.
Estimated Unit Costs: Bicycle signage ~ \$250 each Pavement striping ~ \$3.30 ft



Lake Lynn Wayfinding Signage, Raleigh, NC

4 Recommended Programs and Policies

In addition to engineered infrastructure (Section 3), strong programs and policies can help encourage and support pedestrians within the Town.

4.1 Overview

While development of facilities relates directly to engineering, bicycle and pedestrian programs tend to focus on the other four of the five E's: **encouragement**, **education**, **enforcement**, and **evaluation**. Active transportation policies can improve bicycle and pedestrian friendly design and development of both public and private sector projects. The project team encourages the Town to explore a comprehensive approach to the five E's. This requires ongoing communication and collaboration with a wide range of government agencies, organizations, the community, and individual stakeholders.

Many of the following activities represent continuations and/or enhancements of programs and policies that the Town is already administering. Recommendations in this section seek to enhance ongoing activities and enhance overall livability, walkability, and bikeability for the Town's diverse population (Table 7). Many programs and resources listed in this section are subject to the availability of grant funding. The Town should follow up directly with the organizations listed for more information on the status of these programs or newer funding resources.



4.2 Existing Programs

The Town annually coordinates or participates in approximately eight (8) organized public events to promote outdoor activity and recreation. Common Town-sponsored events include walks/runs, school field trips, seasonal festivals, concerts, and outdoor movie screenings.

Recreational activities are focused during the spring through early fall months. These events and their dates include: Run Warrenton 5k (April), Ghostwalks/Fright Nights (October), Harvest Market (October), Prelude to Christmas (December), Historic Walking tours (all year), and the Warren County Parks and Recreation programming (all year). The Town has supported Mountains-to-Sea bicycle trips every four or five years. The largest and well-known Warrenton event is SpringFest, which is the fourth Saturday in April and coincides with Run Warrenton.

Previous Outreach

The Town has engaged its citizens in walking and biking primarily through its ongoing cultural events, the County's recreational programming, and the development of the Plan. During this Plan's preparation, the Town has expressed interest in holding a Bicycle Helmet Initiative with a companion bicycle safety course for local school children. There is significant potential for the Town to promote walking and bicycling initiatives through its existing programs and new programs identified in Section 4.3.

4.3 Program Recommendations and Resources

4.3.1 Encouragement Programs

The Town can use encouragement programs to strengthen culture for walking and bicycling within the community. Local businesses and Town agencies can all play a role in encouraging pedestrian and bicycling through a variety of opportunities and incentives, some of which are presented below.

Lead agencies and stakeholders:

- Town staff
- County health department
- Community leaders/stakeholders

Elements of a good encouragement program:

- Provides residents casual introductions to bicycle and walking in a non-competitive setting.
- Uses a variety of print and electronic strategies to disseminate relevant bicycling and pedestrian information.
- Celebrates and promotes community wins through print or online media, and word of mouth.

Non-Infrastructure Transportation Alternatives Program

NCDOT has transitioned the Active Routes to School program, a project under NC Safe Routes to School, to a grant-based program funded through the Non-Infrastructure Transportation Alternatives Program. Agencies may request up to three years of funding for projects that encourage children to walk and bike to school, make walking and bicycling more appealing, and facilitate the development of projects and activities to improve transportation safety near schools. Funding may be requested to support activities for community-wide, regional or statewide programs. The Town may choose to coordinate with schools, the school district, or the county to pursue funding and recommend projects.



Walking and Bicycling Maps

User maps are important tools for encouraging walking and biking. The Town can develop print and/or electronic maps and smart phone applications that identify common walking and/or biking routes, identify key destinations, and other available or planned facilities. The Town should refine and update the maps as they develop new facilities and should seek opportunities to distribute to residents and visitors. Colorful, graphic maps should appeal to all ages and abilities and can also include educational information about the rules of the road for drivers, cyclists, and pedestrians; safety; and etiquette

Self-Guided and Group Walking Tours

Walking tours encourage walking and present an opportunity for residents to socialize. By developing and advertising one or more formal tour routes in association with the walking and bicycling maps previously described, the Town could identify routes to connect pedestrians to recreational, shopping, dining, and scenic destinations in addition to the historic architecture tour. Tour routes could begin with existing facilities and expand as the pedestrian network develops. Walking tours could include organized groups with Town-sponsored tour guides.



PedBikeImages.org Laura Sandt

Wayfinding Signs

As the pedestrian and bicycle system develops, and especially as sidewalks are installed and neighborhoods are connected, wayfinding will help contribute to the overall pedestrian environment. Items such as mile markers, consistent themes and logos, and regular wayfinding kiosks will become important elements to encourage walking. Wayfinding should also be incorporated into Bicycle Boulevards through the use of route signage.

The Town can use services such as Walk [Your City] (<https://walkyourcity.org>) to purchase inexpensive, weather resistant signs to educate residents about the distance and direction between destinations.

Awareness Days and Events

The Town can devote specific days of the year to raise awareness related to pedestrian and bicycling issues and promotion. Events can be held in parks, schools, Town facilities, or similar venues.

The Town can use national events to increase use of pedestrian and bicycle facilities, create new versions specific to local events, and add pedestrian topics to existing Town events. Examples of national events include National Walk to Work Day (April), Earth Day (April 22), National Bike to School Day (May 6), National Trails Day (First Saturday in June), and National Walk to School Day (October).



Examples of possible encouragement programs include Open Street Days, Walk to School Day, Walking Routes, and Pop-up installations.



Temporary Installations

The Town can use temporary installations to get the public invested and excited about the multimodal future of Warrenton. There are several types of temporary projects the Town can conduct:

- **Open Streets:** an event where main roads are closed to cars and activities occur in the right-of-way, often including bicycle rides, outdoor seating, and other potential uses for the public space. These events often occur on a weekend and engage the community in imagining community-focused public spaces (examples at <https://openstreetsproject.org/>).
- **Demonstration Projects:** short-term installations of bicycle or pedestrian infrastructure using low-cost and temporary materials. These projects can evaluate the effectiveness of different facilities or recommendations without investing in the development of them.
- **Pilot Projects:** While still temporary, these projects are longer term and help increase engagement and excitement about future projects as well as allowing the design kinks and costs to be worked out before permanent implementation. Pilot projects can provide the community with a short-term example of what this plan produces while funding is secured for permanent facility improvements.

Town Designations

Several national recognition programs encourage towns and cities to promote pedestrian activity. The Town can pursue or strive for progress towards one of the programs that recognize communities that are working to improve access, safety, mobility, and transportation options. Recognition programs include the following examples:

- Walk Friendly Community <http://www.walkfriendly.org/>
- Active Towns <https://www.activetowns.org/>
- Bicycle Friendly Community <https://bikeleague.org>

Encouragement Program Resources

1. Healthy Places By Design <https://healthyplacesbydesign.org/resources/>
2. Non-Infrastructure Transportation Alternatives Program <https://connect.ncdot.gov/projects/BikePed/Pages/Non-Infrastructure-Alternatives-Program.aspx>
3. Healthy Aging Research Network Archives. <http://depts.washington.edu/hprc/resources/products-tools/healthy-aging-research-network-archives/>
4. Livable Communities: Livable in Action. <http://www.aarp.org/livable-communities/livable-in-action/>
5. Move More Walking Map Guide. <http://www.eatsmartmovemorenc.com/WalkingMapGuide/WalkingMapGuide.html>.
6. National Center for Safe Routes to School. <http://saferoutesinfo.org/>.
7. Walk Wise, Drive Smart: A Senior Pedestrian Safety Program in Hendersonville, North Carolina. http://www.pedbikeinfo.org/cms/downloads/WalkWise_Hunter.pdf

4.3.2 Education Programs

The Town can take advantage of existing educational materials from state or federal programs and tailor these to the specific needs of the community. The educational materials should promote safe behaviors, rules, and responsibilities for all roadway users including pedestrians, bicyclists, and motorists, and overcome barriers to bicycling. Local businesses, Town agencies, and local advocates can all play a role in developing and distributing educational materials.

Lead agencies and stakeholders:

- Town staff
- County health department
- Dedicated and committed community leaders/stakeholders

Elements of a good education program:

- Provides the community with information on bicycle and pedestrian laws, safe behaviors, and skills.
- Reaches people of all skill levels, physical abilities, and ages.
- Delivers information through a variety of print and electronic messages and hands-on training.
- Includes all roadway users: motorists, bicyclists, and pedestrians.

Project-Related Efforts

The Town should coordinate closely with NCDOT and other local stakeholders when elements of the Plan and other pedestrian roadway improvements are planned or implemented. Public involvement and education are essential throughout the project process. Communication with the public during the planning phase ensures the community is aware of upcoming events or potential impacts to their roadway, construction schedules, improvements, and proposed completion dates. This also provides an opportunity for community feedback, which can help inform future educational efforts on the project. Once a project is completed, education efforts should provide information on how to use the facility. Project-related coordination efforts can be distributed through local media outlets, on-site, at special events/ community events, project-related meeting, local and Town websites, and in coordination with NCDOT outreach.

Driver Education

Stakeholders from the community expressed the need for driver education in the community. Town staff, Steering Committee members, and community leaders can work together to identify priority educational topics, key audiences, and outreach methods (e.g., signage, workshops, print media). Potential educational campaigns, as discussed by both community stakeholders and Steering Committee members, include the following:

- Bicycling rules of the road.
- General rules of the road conducted at day cares and churches (for young residents).
- General awareness signs for visitors entering Warrenton.

Internal Education

Education is not limited to the community, it should also include all key staff involved in Plan implementation. This includes Town staff, Board members, and Steering Committee members as well as NCDOT Division staff and regional or county staff, when relevant. Opportunities for education include, but are not limited to, the following:

- Staff presentations on sessions or conference events.
- Meetings or retreats on the Plan to discuss the status of the Plan, potential funding opportunities, roadblocks to implementation, or other similar pertinent information.
- Coordination between agencies and departments, such as information or resource sharing between transportation, planning, health, facilities, parks and recreation, and other such Town or county departments.
- Training opportunities—webinars, brown bag lunch presentations—to educate staff on pedestrian guidelines and designs and best practices from across the state and nation.



Let's Go NC – Pedestrian and Bicycle Curriculum

NCDOT sponsors this free educational program and provides instructional lesson plans, videos, and other downloadable programming to teach elementary age children how to walk and bicycle safely. Instructors do not need to receive training; for example, public safety or local educators can provide the training if desired. The Town should work with local agencies, schools, or community organizations to identify one or more individuals willing to take responsibility for conducting the training.



Eat Smart, Move More NC

Eat Smart, Move More NC is a North Carolina movement that promotes physical activity and healthy eating. They provide free, downloadable resources to encourage communities, schools, grocery stores, and similar businesses to make the healthy choice the easier choice. Community-based tools support creating active outdoor play spaces, information on coalitions to support the movement, and handouts for distribution, among others.

Community Bicycle Tune-Ups

Lack of access to bicycles, tune-up tools, and training on bicycle maintenance were reported as barriers to bicycling in the Warrenton area during both the survey and the public engagement events. Warrenton can host a community-tune up event where local bike shops or those experienced in bicycle maintenance can provide assistance with minor bicycle maintenance. These events can help overcome resistance to bicycling, and they may be combined with distribution of bicycle safety information (e.g. "Let's Go NC"), bicycle helmets, and promotion of the local and regional bicycle network. Tune-ups can be scheduled during weekends, in coordination with other community events, and during national Bike to Work Month in May.

Education Program Resources

1. Eat Smart, Move More NC. <http://www.eatsmartmovemorenc.com/index.html>.
2. Guide to Creating Active Outdoor Play Spaces. <http://www.eatsmartmovemorenc.com/ActivePlaySpaces/ActivePlaySpaces.html>.
3. Eat Smart, Move More Coalitions. <http://www.eatsmartmovemorenc.com/ESMMCoalitions/ESMMCoalitions.html>.
4. Eat Smart, Move More Handouts. <http://www.eatsmartmovemorenc.com/ESMMHandouts/ESMMHandouts.html>.
5. Federal Highway Administration Pedestrian and Bicycle Safety. http://safety.fhwa.dot.gov/ped_bike/.
6. Institute for Transportation Research and Education: Education and Training – Bicycle and Pedestrian. <https://itre.ncsu.edu/training/bike-ped/>.
7. Let's Go, NC! <https://www.ncdot.gov/bikeped/safetyeducation/letsgonc/>.
8. National Highway Traffic Safety Administration Pedestrian Safety. <https://www.nhtsa.gov/road-safety/pedestrian-safety>.
9. NCDOT Integrated Mobility Division. <https://connect.ncdot.gov/projects/BikePed/Pages/default.aspx>.
10. Pedestrian and Bicycle Information Center. <http://www.pedbikeinfo.org/>.
11. WalkBikeNC. <https://www.ncdot.gov/bikeped/walkbikenc/>.

4.3.3 Enforcement Programs

Much like education programs, the purpose of enforcement programs can be used to educate all roadway users about traffic laws and encourage safer behaviors. Programs include periodic reminders or events to obey traffic rules and ongoing monitoring of public spaces. Enforcement programs also reinforce and support the other E's.

Lead agencies and stakeholders:

- Law enforcement agencies
- Town staff

Elements of a good enforcement program:

- Reviews and updates laws that impacts bicycle and pedestrian safety.
- Ongoing enforcement of relevant laws.
- Reduces the number of pedestrian and bicycle crashes.



Watch for Me NC

This statewide pedestrian and bicycle safety campaign intends to reduce pedestrian and bicycle injuries and deaths through education and enforcement. Watch for Me NC targets all roadway users and provides useful resources and tools for municipalities and residents.



SeeClickFix

Community members can use this website to report neighborhood concerns related to infrastructure, such as potholes, streetlight issues, or graffiti. The comments are routed to the local officials who can respond to the comment with information. The Town can use this resource to better track community concerns and identify areas in need of attention.

Speed Feedback Signs

The Town can use temporary traffic calming devices at key locations. These devices are mobile and can be placed along W Ridgeway Road, Main St, and E Macon St.

Motorist Enforcement

Local police should work together with Town officials to use any of the programs and resources to coordinate one-time or ongoing motorist enforcement campaigns. Enforcement may include monitoring vehicle speeds, encouraging safe pedestrian crossing behaviors, or RRFB compliance.

Another approach to motorist enforcement is to incentivize or offer rewards for appropriate behavior. Local law enforcement can conduct a pedestrian enforcement campaign that commends pedestrians for using crosswalks. The Town can work with local business owners to provide gift certificates, coupons, or other small tokens as rewards. The Town should conduct these enforcement efforts at highly visible locations and publicize them in the community and via social media.

Enforcement Program Resources

1. FHWA Partnering with Law Enforcement. https://www.fhwa.dot.gov/environment/bicycle_pedestrian/ntpp/partner_law.cfm.
2. NCDOT Watch for Me NC. <http://www.watchformenc.org/>.
3. NHTSA Resource Guide on Laws Related to Pedestrian and Bicycle Safety. <https://one.nhtsa.gov/people/injury/pedbimot/bike/resourceguide/index.html>.
4. Pedestrian and Bicycle Information Center Training and Events. <http://www.pedbikeinfo.org/training/index.cfm>.
5. Pedestrian and Safety Guide and Countermeasure Selection System. <http://www.pedbikesafe.org/pedsafe/>.

4.3.4 Evaluation Efforts

The Town can use evaluation efforts to understand how well the strategies in the plan are working over time. Evaluation activities include setting goals, collecting baseline data (where possible), setting timetables, and collecting follow up data for all projects. Not all evaluation activities are data-driven; qualitative feedback and partnerships can assist with achieving the goal of evaluating program/strategy effectiveness and identifying improvements.

Lead agencies and stakeholders:

- Bicycle and Pedestrian Committee
- Steering Committee
- Town staff
- Public Works maintenance staff

Elements of a good evaluation effort:

- Dedicated staff or volunteer who will take responsibility of monitoring all elements of the Plan.
- Established metrics that are measurable and have associated timelines.

Town of Warrenton Bicycle and Pedestrian Committee

The Town should establish a Bicycle and Pedestrian Committee and engage with the Steering Committee members. The Bicycle and Pedestrian Committee should be responsible for moving the Plan towards implementation and tracking success. Steering Committee members can help champion the Plan by working closely with the Bicycle and Pedestrian Committee to help measure success, work as liaisons with the greater community, and help identify solutions to barriers during implementation.

Annual Bicycle Count Program

The Town and the Bicycle and Pedestrian Committee can work together to conduct annual bicycle and pedestrian counts to identify high-traffic locations. Volunteers from schools or community organizations can conduct manual observational counts at different times of the day and days of the week. Counts for specific locations

should be done prior to implementation of a project to establish a baseline and then continue annually or on a two-year cycle. Observational qualitative data can also be used to identify locations for specific safety, enforcement, and educational efforts.

Conduct Road Safety Audits

Town staff and representatives can conduct Road Safety Audits on priority corridors to identify more specific engineering-related improvements. This is a formal and detailed process that involves a multidisciplinary team to identify roadway elements that present the most safety concerns and formulate solutions to eliminate or mitigate the safety issues. Technical assistance may be available from Federal Highway Administration, or the Town can consider hiring an outside consultant to organize and conduct Road Safety Audits. Main Street, Macon St (US 158), and West Ridgeway Road may be suitable candidates for Road Safety Audits in coordination with NCDOT and FHWA.

Community Surveys

The Town can use surveys and other similar feedback mechanisms as tools to gauge community-wide acceptance and understanding of new projects; needs and interests for other future projects; and other community concerns that may be addressed through Encouragement and Education programming. The Town should work with stakeholder groups who reach broad audiences to help disseminate survey tools and collect feedback.

Facility Inspection and Maintenance

A key piece of evaluation is measuring and identifying maintenance needs, particularly after implementation. Public Works maintenance and facility staff should conduct routine maintenance checks of installed pedestrian projects to identify general wear and tear and immediate fixes—such as potholes and broken asphalt—that may impede use. The Town should establish a plan and timeline for addressing such issues. This encouragement initiative relies upon crowd-sourcing to report maintenance needs.

Evaluation Resources

1. National center for Safe Routes to School – Walkability Checklist. <http://archive.saferoutesinfo.org//sites/default/files/walkabilitychecklist.pdf>.
2. Pedestrian and Bicycle Information Center – Counts. http://www.pedbikeinfo.org/planning/tools_counts.cfm.
3. FHWA – Road Safety Audits. <https://safety.fhwa.dot.gov/rsa/>.

4.4 Policy Recommendations

4.4.1 State Bicycle and Pedestrian Transportation Policy

The NCDOT Integrated Mobility Division web page includes references and links to state and federal policies to support accommodation of pedestrians as part of the transportation system. See <https://www.ncdot.gov/divisions/bike-ped/Pages/bike-ped-laws.aspx> along with the summaries below.

Complete Streets Policy and Guidelines

This policy requires planners and designers to consider and incorporate multimodal alternatives in the design and improvement of all transportation projects within a growth area of a municipality. In July of 2012, NCDOT adopted guidelines to support the policy. In August of 2019, NCDOT updated its Complete Streets Policy to ensure the development of multimodal facilities in highway, resurfacing, and bridge projects.¹ If a pedestrian or bicycle facility has been identified as a need in an adopted plan, NCDOT will fully fund the cost of designing, acquiring right of way, and constructing the facility if the facility is coupled with an improved roadway or highway project (also known as an incidental project). For facilities that are not in a plan, but a need has been identified, Warrenton would only pay 5% through a tiered cost share based on municipal population.

Bridge Policy

NCDOT's Bridge Policy includes information to address sidewalks and bicycle facilities on bridges, including minimum handrail heights and sidewalk widths.²

Recommendation: Town staff should be familiar with State pedestrian policies and laws, including best practices and ensure that NCDOT projects include pedestrian accommodations.

Recommendation: Coordinate with NCDOT Division 5 plans to resurface or reconstruct NCDOT-owned and maintained roadways. Ensure that plan recommendations for pedestrian facilities are included on those streets based upon the 2019 Complete Streets policy. If a compromise to the original recommendation is needed, then contact NCDOT Division of Integrated Mobility for guidance on appropriate alternatives.

1. NCDOT Complete Streets Policy and Guidance. <https://connect.ncdot.gov/projects/Roadway/RoadwayDesignAdministrativeDocuments/CS%20Policy%20Update%20Memo%20Secretary%20208.28.19.pdf>
2. NCDOT Bridge Policy. <https://connect.ncdot.gov/projects/Roadway/RoadwayDesignAdministrativeDocuments/Bridge%20Policy.pdf>
3. Asheville Greenway Ordinance. https://library.municode.com/nc/asheville/codes/code_of_ordinances?nodeId=PTIICOR_CH7DE_ARTXIDEDEST_S7-11-4OPSPST
4. Chapel Hill Greenway Ordinance. https://library.municode.com/nc/chapel_hill/codes/code_of_ordinances?nodeId=CO_APXALOUSMA_ART5DEDEST_5.18JOWARIBUPR

4.4.2 Town of Warrenton, North Carolina Code of Ordinances

The Code of Ordinances are the current legislation adopted by the Town and available from its website. Pedestrian- and cyclist-specific ordinances primarily focus on traffic code and proper use of traffic signals and facilities. Additionally, sidewalk ordinances identify lawful use of sidewalks including details on sidewalk dining. Below are recommendations on additional ordinances to strengthen Warrenton's ability to create a multi-modal network.

Recommendation: The Town should include all relevant local and state ordinances and laws related to pedestrians, cyclists, and sidewalks in education and encouragement materials and programming. Information should be stated in an appropriate reading level and should include images and graphics where appropriate, so the information is easily accessible to all community members.

Sidewalks

Recommendation: The Town should adopt an ordinance identifying appropriate design standards for pedestrian facilities.

Recommendation: The Town should establish a maintenance fund to assist with maintaining and replacing existing and new sidewalks.

Recommendation: The Town should establish street design standards that detail connectivity requirements for new sidewalks, curb, and gutter in all new development and redevelopment.

Bicycle Facilities

Recommendation: The Town should establish street design standards that detail connectivity requirements for new bicycle facilities in all new development and redevelopment.

Greenway Facilities

Before Warrenton begins acquiring land to develop greenways or Shared-Use Paths, it can adopt a series of ordinances to ensure a successful implementation.

Example Ordinance Provisions:

1. Include natural feature protection and open space requirements within the zoning ordinance. *Asheville Ordinance Section 7-11-43.*³
2. Develop pathway standards and buffer requirements. *Chapel Hill Ordinance 5.184.*⁴
3. Adopt a map with planned greenway routes.

Once the Town has adopted these ordinances, it may begin acquiring land through a variety of methods. While it may take a while to complete the network, the Town should take a holistic approach to land acquisition. Below are several common methods municipalities in North Carolina have used to acquire land for greenways:

- **Conservation Zoning:** conservation zoning allows the town to identify natural areas, greenways, flood zones, and open space to preserve. This zoning can create a buffer zone around waterways where development is not allowed. The town must ensure the implementation of a conservation zone does not diminish the value of the land.
- **Easements:** there are multiple types of easements that can be used to acquire access to land to develop a greenway. Property owners that grant access through an easement retain ownership and all the rights associated except those identified in the easement. Many municipalities use sewer easements or utility easements as a greenway—but they often must do so through a new easement, as the use of the land for public access is not included in the existing easement.
- **Purchase/Donation:** The last common method of acquisition is through purchasing the land, and this is the most permanent method of procurement. There are multiple methods of purchasing or having the land donated. Through donation, the land owner is eligible for both federal and state tax deductions.

Recommendation: The Town should identify a preferred method for acquiring land for greenways and adopt the corresponding supporting ordinance.

Zoning

Recommendation: The Town should explore form-based codes and streetscape requirements that encourage bicycle and pedestrian uses in the Downtown Commercial District.

4.4.3 Other Plans and Coordination

There are several local and regional plans that detail pedestrian-related projects and improvements. However, the Town does not have a coordinating body to monitor ongoing or planned projects for coordination opportunities. There is an opportunity to work with surrounding towns and regional representatives and governing bodies to coordinate efforts, share experiences, and learn success stories that may be applicable.

Recommendation: The Town should work with Warren County and the KTCOG to identify opportunities to coordinate efforts for transportation on a regional level.

Recommendation: The Town should identify and engage community organizations and leaders to be responsible for monitoring and implementing the Plan

Table 7. Four E's Recommendation Overview

Strategy	Target Audience	Lead Agency/ Stakeholder	Partnerships for Success	Time Frame	Duration	Costs
ENCOURAGEMENT						
Non-Infrastructure Transportation Alternatives Program	Schoolchildren, Parents	Town	County Department of Public Health, School District	Immediate	Ongoing	\$
Walking / Bicycling Maps	General Public	Bicycle Pedestrian Committee	Town Staff, Volunteers	Near Future – Long-Range	Ongoing	\$ - \$\$
Self-Guided / Group Walking Tours	General Public	Bicycle Pedestrian Committee	Town Staff, Volunteers	Near Future – Long-Range	Periodic	\$
Wayfinding Signs	General Public	Bicycle Pedestrian Committee	Town Staff, Volunteers	Immediate	Ongoing	\$ - \$\$
Awareness Days/Events	General Public	Town	Bicycle Pedestrian Committee, Volunteers	Immediate – Long-Range	Ongoing	\$
Temporary Installations	General Public	Town, Bicycle Pedestrian Committee	Volunteers, NCDOT	Near Future – Intermediate	Ongoing	\$-\$\$
Town Designations	General Public	Town	Bicycle Pedestrian Committee	Long-Range	Ongoing	\$
EDUCATION						
Project-Related Efforts	General Public	Town	NCDOT	Immediate – Long-Range	Ongoing	\$
Driver Education	General Public	Town	NCDOT	Near Future – Long-Range	Ongoing	\$ - \$\$\$
Internal Education	Town staff/	Town	NCDOT, Regional, County staff	Immediate – Long-Range	Periodic	\$
Let's Go NC	representatives	Town	NCDOT, Active Route to School Coordinator	Immediate	Periodic	\$
Community Bicycle Tune-Ups	General Public, schoolchildren	Town	Volunteers	Near Future	Periodic	\$
Eat Smart, Move More NC	General Public, schoolchildren	Town	NCDPH, ESMM	Immediate	Ongoing	\$

Strategy	Target Audience	Lead Agency/ Stakeholder	Partnerships for Success	Time Frame	Duration	Costs
ENFORCEMENT						
Watch for Me NC	Motorists	Town	Law Enforcement, NCDOT	Immediate – Long-Range	Periodic	\$
SeeClickFix	General Public	Town		Immediate – Long-Range	Ongoing	\$
Speed Feedback Signs	Motorists	Town	Law Enforcement, NCDOT	Long-Range	Ongoing	\$\$ - \$\$\$
Motorist Enforcement	Motorists	Town	Law Enforcement	Immediate	Periodic	\$\$ - \$\$\$
EVALUATION						
Bicycle and Pedestrian Committee	Town Staff / General Public	Bicycle Pedestrian Committee	Town Staff, Steering Committee	Near Future – Long-Term	Ongoing	\$
Annual Pedestrian Count Program	General Public	Bicycle Pedestrian Committee	Town Staff, Steering Committee	Near-Future – Long-Range	Periodic	\$ - \$\$\$
Road Safety Audits	Town Staff	Town of Warrenton	Bicycle Pedestrian Committee	Near-Future – Long-Range	Periodic	\$\$ - \$\$\$
Community Surveys	General Public	Bicycle Pedestrian Committee	Town Staff, Steering Committee	Near Future – Long-Range	Periodic	\$\$ - \$\$\$
Facility Inspection/Maintenance	Town Staff	Town of Warrenton	Facilities	Near Future – Long-Range	Periodic	\$\$\$

Time Frame: Immediate = initial steps in Plan, short-term; Near Future = implementation phases; Long-Range = post-implementation, evaluation and maintenance phases

Duration: Ongoing = continual updates needed, no clear end; Periodic = occasional, non-specified milestones

Costs: \$ = Minimal costs/free; \$\$ = Moderate costs, may be available through local funds/investments; \$\$\$ = Requires investment, grants, additional funding resources
 Website links for Encouragement, Education, Enforcement and Evaluation are listed at the end of each section (4.3.1 through 4.3.4).



5 Implementation Plan

Following through on these recommendations will require persistence and leadership from the local community. Although local sources of funding can go a long way in achieving community aims, there are a variety of ways for the residents of Warrenton to encourage walking and biking in their community.

5.1 Implementation Overview

This section outlines the organizational structure and steps necessary to successfully achieve the goals set forth by this Plan. The recommendations within this section include:

- Organizational structure for administering programs.
- Action items for building a culture of active living.
- Methods for monitoring progress and continuing encouragement.
- Potential funding sources.

5.2 Organizational Framework for Implementation

Successful implementation of the Plan will require the cooperation of several agencies and organizations. Many of these partnerships already exist, and this Plan will build on those partnerships. Examples of these partnerships include the relationships between NCDOT, the Town, and KTCOG. Still other connections will be formed through the implementation of this Plan. These coalitions will likely be formed within the community itself, as the Town coordinates its efforts with local schools, athletic associations, and other community groups.

Role of NCDOT

As the administrator of the Bicycle and Pedestrian Planning Grant Initiative and the primary agency concerned with transportation planning, engineering, and construction in the State of North Carolina, NCDOT will be an important partner in the implementation of this Plan. After the adoption of this Plan, NCDOT should continue to provide technical assistance and consulting regarding pedestrian and bicycle transportation planning in Warrenton. NCDOT Division 5 is responsible for construction and maintenance of pedestrian facilities in the Town. It will be the primary partner for the design and construction of recommended projects made in Section 3 of this Plan.

The Strategic Prioritization Office of Transportation (SPOT) process prioritizes most NCDOT division projects, per the state's Strategic Transportation Investment (STI) law. SPOT is a data-driven approach to project prioritization for all transportation mode projects, including bicycle and pedestrian project improvements. STI provides three funding tiers for transportation projects: Statewide Mobility, Regional impact, or Division needs. Standalone pedestrian projects are eligible for funding as part of the Division Needs category. Bicycle and pedestrian projects compete against highway and other transportation projects in this category. Half of the score is based on data-centric methodology determined by NCDOT and the other half of the score is dependent on local input from the NCDOT Division 5 office and the KTRPO.

The NCDOT Division of Integrated Mobility is the primary resource for guidance on bicycle and pedestrian policies, laws, and safety education (Section 4). It is also the administrator for a wide variety of statewide initiatives aimed at promoting safety and participation in active transportation. As the Town progresses with the

More information on the STI and the SPOT process: <https://www.ncdot.gov/strategictransportation-investments/>

implementation of this Plan, it should consult the online resources available through the Division of Integrated Mobility for guidance on specific pedestrian treatment issues.

Role of the Kerr-Tar Rural Planning Organization (KTRPO)

As the rural planning organization (RPO) responsible for transportation planning within Franklin, Granville, Person, Vance, and Warren counties, the KTRPO should consider implementing the projects recommended in this Plan. For the infrastructure needs of Warrenton to be met, KTRPO should continue to consider the multimodal transportation needs of the Town in the County's comprehensive transportation plan (CTP), last updated in 2010. Opportunities to improve the bicycle and pedestrian environment should be taken when roadways are scheduled for maintenance or construction. Many of the projects outlined in this report can be accomplished in unison with maintenance programs initiated by the KTRPO and funded in combination with state roadway improvement programs such as SPOT. KTRPO should also consider implementing this Plan's recommended projects in coordination with the Non-Infrastructure Transportation Alternatives Program (formerly the Active Routes to School program) to encourage more walking and bicycling among school children.

Role of Warren County

Planning by the Warren County government has a very tangible effect on the Town of Warrenton. The County is the primary organization governing land use planning, transportation planning, and public health initiatives in and around the Town. It is vital that these plans align with common goals that span municipal boundaries. While Warren County is responsible for more than just Warrenton, there are several crucial ways for the County to support this Plan:

- Support active transportation through regional trails and networks.
- Promote active transportation and public health through county-wide programming.
- Prioritize pedestrian and bicyclist safety when updating the CTP.
- Include the Plan's facility recommendations as an amendment to the existing CTP.

Role of the Town of Warrenton

Warrenton is responsible for implementing this Plan. Through its adoption, the Town will be empowered to act as a champion for bicycle and pedestrian needs. The Town should form pedestrian and bicycle advisory committees that will serve as leaders for bicycle and pedestrian planning in Warrenton. As champions of active transportation, committee members should encourage the full implementation of this Plan. This includes advocating for the project and programmatic recommendations in this Plan, as well as developing other events and programs as they work in the community. A great example of this in practice is a wayfinding signage program. This would be functional for pedestrians and would enhance the sense of community and aesthetics in Warrenton.

5.3 Implementation Action Steps

This section outlines general steps to fully implement this Plan. Steps are assigned to three categories: policy, programming, and infrastructure. A timeline of these action items is provided in Table 8.

5.3.1 Policy Action Steps

Adopt This Plan

The first step for the Town of Warrenton to build upon the existing regional plans and policies is adopting this Plan. Adoption will improve the Town's eligibility to receive priority funding for projects.

Amend the Warren County CTP

Following the local adoption of the plan, the Town should approach the Warren County Commissioners to amend the Warren County CTP to incorporate the plan's recommendations and seek the KTRPO's endorsement. This inclusion in the County's CTP would solidify the plan's recommendations for not only bicycle and pedestrian facilities in Warrenton, but also interconnected facilities throughout the County and to localities such as Macon and Norlina.

Establish the Bicycle & Pedestrian Advisory Committee

Warrenton has a history of citizen involvement in action committees. Its citizens have come together to create a Revitalization Committee, Historic District Commission, and Quilters Lane Committee, and the Steering Committee that guide the Bicycle and Pedestrian Plan. The Town should take its existing Steering Committee—which was established to develop this plan—and transform it to a bicycle and pedestrian advisory committee (BPAC). This committee would be the primary advocate for promoting pedestrian and bicycle planning and events in Warrenton and oversee event programming and encouragement within the community. Local champions should represent many different interests within the Town, such as the elementary school, Town staff, police, and many others, which share the common goal of making Warrenton a safer place to bike and walk. Other North Carolina communities, such as Mebane and Greenville, have established BPACs that can serve as a model for Warrenton.

Continue to Enforce State and Local Regulations

Ensuring that motor vehicles obey the speed limit, pedestrian signals, and other traffic regulations can improve the perception and desirability of walking Warrenton. Additionally, ensuring that pedestrians and bicyclists obey traffic laws themselves can ensure that these travelers stay out of harm's way. This creates an environment that is safe for all roadway users. The NCDOT Division of Integrated Mobility offers helpful links to many of these regulations through its website: <https://www.ncdot.gov/bikeped/lawspolicies>.

5.3.2 Program Action Steps

Create Educational Outreach Programs

Education provides people of all ages the confidence to walk and bike alongside motor vehicles. Educational outreach should also extend to drivers of motor vehicles as well. Awareness of pedestrians and bicyclists is a skill that is learned and can be improved upon with active engagement.

Create Encouragement Outreach Programs

Many of these encouragement programs serve to remind individuals how convenient and attainable an active lifestyle can be. Walk and bike to work and school events can illustrate how easy it is to complete daily activities through active transportation. Open streets events bring people together, build a sense of community, and allow them to engage with the community without needing to drive and find a parking space.

Establish a Monitoring and Benchmarking Program

The BPAC should devise ways of monitoring pedestrian and bicycling activity, as well as preferred routes and destinations. The needs and preferences of the community will evolve over time. To ensure that Town officials and planners can respond effectively, there should be an established methodology for tracking these changes, evaluating current programs, and generating new priorities. The benchmarking program should be designed to support the Plan's goals and associated performance measures noted in Section 5.4.

Become Registered as a Walk Friendly and Bicycle Friendly Community

The Town could choose to apply for the designations as a Walk Friendly Community through the University of North Carolina's Highway Safety Research Center (HSRC) and as a Bicycle Friendly Community through the League of American Bicyclists. These designations offer the opportunity for Warrenton to assess its current conditions and receive feedback from third party perspectives. By undergoing this process, the Town may be more equipped to apply for future grant funding through organizing its existing conditions and refining its vision as a leading pedestrian friendly community. Other Walk Friendly and Bicycle Friendly-recognized communities in North Carolina include Charlotte, Davidson, Asheville, Cary, and Boone.

5.3.3 Infrastructure Action Steps

While there are several phases involved in infrastructure project implementation, the steps outlined in this section are fundamental for the Town to take as it implements the new infrastructure projects. The action steps identified below are the steps to successful project implementation; execution of this plan begins with Step 3.

Identify Funding Sources

Federal, state, and local funding sources will be necessary to implement this Plan. No one source should be relied upon to complete all of the proposed recommendations. It is essential that local institutions find alternative possibilities for funding to help fill gaps between official sources. Many of these initiatives are related to safety and public health.

ACTION STEPS

1. *Create the plan*
2. *Prioritize projects*
3. *Work with partners to seek non-local funding*
4. *Secure local capitol for future funding match needs*
5. *Study priority projects for feasibility and property acquisition needs*
6. *Develop construction plans*
7. *Construct projects*
8. *Re-evaluate priorities*

Perform a Road Safety Audit

W Ridgeway Road and Main Street were repeatedly mentioned by Steering Committee members and public workshop attendees as barriers to pedestrian travel with numerous intersections that made pedestrians feel unsafe. These corridors are ideal candidates for a Road Safety Audit (RSA), which is a formal examination of mobility safety performance to identify potential road safety issues and identifies opportunities for improvements in safety for all road users. The FHWA works with State DOTs and local jurisdictions to encourage RSAs along existing roads and intersections. The goal of an RSA is to identify elements of the road that may present a safety concern and recommend a standard approach to elimination or mitigation.

Prioritize Projects

This Plan includes several recommendations from previous regional and local transportation plans. These foundational plans and projects reflect community needs, such as safety along Main Street, pedestrian connections along Hall Street, and sidewalk connections and a crossing to the Hayley-Hawkins Park. The most highly scored projects in Section 3 should be considered for implementation in the near to mid-term.

Review the Applicability of Future Projects

Many of the projects in this Plan, as well as others concerning transportation in Warrenton, will need to undergo more detailed site-specific evaluation as future revisions are made. Warrenton's priorities will change over time, and projects should be constantly re-evaluated for future needs. Town staff and the BPAC should work jointly to this end. These priority projects should be the Town's focus as it works with the County and the RPO for funding and implementation through local and regional plans.

5.3.4 Action Item Timeline

Table 8. Plan Implementation Action Item Timeline

Strategy	Contributing Stakeholders	Lead Agency/ Stakeholder	Time Frame	Duration
POLICY				
Adopt this Plan	Town Council	Town Staff	Immediate	Initial
Amend the CTP	Town Council, Warren County Commissioners, KTRPO	Warren County Commissioners	Near Future	Once
Finalize the Bicycle and Pedestrian Committee	Town Staff, Bicycle Pedestrian Advisory Committee	Town Staff	Immediate	Periodic
Continue to Enforce State and Local Regulations	Town Staff, Law Enforcement, Bicycle Pedestrian Advisory Committee	Police	Near Future – Long-Range	Ongoing
PROGRAM				
Create Educational Outreach Programs	Bicycle Pedestrian Advisory Committee	Town Staff	Near Future – Long-Range	Ongoing
Create Encouragement Outreach Programs	Bicycle Pedestrian Advisory Committee	Town Staff	Near Future – Long-Range	Ongoing
Establish a Monitoring and Benchmarking Program	Town Staff, Bicycle Pedestrian Advisory Committee	Town Staff	Immediate – Long-Range	Ongoing
Become Registered as Walk and Bike Friendly Communities	Town Staff, Bicycle Pedestrian Advisory Committee	Town Staff	Near Future – Long Range	Periodic
INFRASTRUCTURE				
Identify Funding Sources	Town Staff, Bicycle Pedestrian Advisory Committee	NCDOT & Town Staff	Immediate – Long-Range	Periodic
Perform a Road Safety Audit	NCDOT Transportation Safety & Mobility Unit, FHWA Division Office, Town Staff	NCDOT & Town Staff	Near Future – Intermediate	Once
Build the Priority Projects Outlined in this Plan	NCDOT, Warren County, Town Staff, KTRPO	NCDOT	Near Future – Intermediate	Ongoing
Review the Applicability of Future Projects	NCDOT, KTRPO, Warren County, Town Staff, Bicycle Pedestrian Advisory Committee	NCDOT	Long Range	Periodic

Time Frame:

- Immediate = initial steps in Plan, short-term;
 - Near Future = implementation phases;
 - Intermediate = final implementation phases;
 - Long-Range = post-implementation, evaluation and maintenance phases
- Duration:
- Initial = preliminary action;
 - Ongoing = continual updates needed, no clear end;
 - Periodic = occasional, non-specified milestones

5.4 Performance Measures

Performance measures should be developed to evaluate this Plan's action items and programs. Baseline conditions, such as pedestrian counts and event attendance, should be gathered before any of the action items are implemented. This allows the Town and the BPAC to track the progress of successful programs as they grow and mature. Determining which programs are effective and which ones are less effective within the Warrenton context will be critical in making future decisions regarding the full implementation of this Plan.

Potential performance measures should connect directly to the Plan's goals as identified in Section 1.2. These could include:

- Goal 1: Plan for interconnected, safe, pedestrian and bicycle networks
 - » Number of community assets connected by bicycle or pedestrian facilities
 - » Rate of bicycle and pedestrian crashes (i.e. rolling five-year average)
 - » Bicycle and pedestrian counts along designated corridors or routes (i.e. Main Street, NC Bike Route #4)
- Goal 2: Engage the public to identify possible barriers to non-automotive travel
 - » Reported perception of the Town's walking and bicycling infrastructure (i.e. survey reported)
- Goal 3: Support the Town as a destination for bicycling and walking
 - » Number of annual public walking and bicycling events
 - » Attendance at public walking and bicycling events
- Goal 4: Identify opportunities for new or improved small public places
 - » Reported implementation of the Town's Streetscape Plan and the County's Recreation Master Plan
- Goal 5: Ensure the integration of past and ongoing planning recommendations
 - » Progress towards this Plan's implementation timeline

5.5 Funding Sources

Funding sources to consider moving forward include, but are not limited to, the following. Refer to Appendix B for additional details on federal and state funding options.

Federal Funding Sources

- **Congestion Mitigation and Air Quality funding (CMAQ)¹**
- **HUD State Community Development Block Grant Program²:** Provides assistance for community projects for smaller communities that benefit low to middle income households.

State Funding Sources

- **State Transportation Improvement Program (STIP)³**
- **Surface Transportation Program-Direct Allocation funding (STP-DA)⁴**
- **State Street-Aid (Powell Bill) Program⁵**
- **NCDOT HSIP Hazard Elimination Program⁶:** Safety grant program utilizing federal and state funding to address safety and potential safety issues. Projects are selected based on a cost-benefit ratio with safety benefits being classified in terms of crashes reduced.
- **Governor's Highway Safety Program Grant⁷:** Safety grant program specifically related to preventing crashes on North Carolina roads.
- **Eat Smart, Move More NC⁸:** Provides a variety of links and resources, including potential funding sources for public health initiatives.
- **Non-Infrastructure Transportation Alternatives Program⁹**
- **NC Parks and Recreation Trust Fund PARTF Program¹⁰:** Provides dollar-to-dollar matching funds for the creation of parks and recreational facilities. Warren County has been successful in obtaining PARTF funds for the Hayley-Haywood Park in 2016.
- **NC Regional Trails Program¹¹:** Provides funding for trails projects that are construction ready for grant funding and leverage local funds to meet recreational trail and trail-needs.

Third Party Funding Sources

- **American Hiking Society’s National Trails Fund Grant¹²:** Organization that offers micro-grants (\$500-\$3,000) to active members of the alliance of hiking organizations to improve hiker access or hiker safety. Recipient organization must be a 501(c)(3) non-profit.
- **AARP Community Challenge¹³:** A ‘quick-action’ grant to fund projects that improve transportation and public spaces through either a permanent physical improvement or a temporary demonstration that leads to long-term change. 2020 grant cycle is expected to open in February.
- **National Association of Realtors Placemaking Grant¹⁴:** The Placemaking Grant funds the creation of new, outdoor public spaces and destinations in a community, and it is accessible through state and local REALTOR® Associations. Potential funded projects include demonstration projects like parklets, pop-up parks, pedestrian plazas, bike lanes, and amenities like street furniture, paint, signage, materials, landscaping, and murals.
- **Better Block Foundation¹⁵:** The Better Block Foundation is a 501(c)3 nonprofit that educates, equips, and empowers communities and their leaders to reshape and reactivate built environments to promote the growth of healthy and vibrant neighborhoods. Its services support the reimagination of public spaces to include active transportation like walking and bicycling.

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1. Congestion Mitigation and Air Quality Improvement (CMAQ) https://www.fhwa.dot.gov/environment/air_quality/cmaq/
 2. NC Department of Commerce – Community Development Block Grants <https://www.nccommerce.com/grants-incentives/public-infrastructure-funds/infrastructure-federal-cdbg-economic-development>
 3. NCDOT Strategic Transportation Investments (STI) <https://www.ncdot.gov/strategictransportationinvestments/>
 4. Surface Transportation Block Grant Program (STBG) <https://www.fhwa.dot.gov/specialfunding/stp/>
 5. State Street-Aid (Powell Bill) Program <https://connect.ncdot.gov/municipalities/state-street-aid/pages/default.aspx>
 6. NCDOT Highway Safety Improvement Program (HSIP) <https://connect.ncdot.gov/resources/safety/pages/nc-highway-safety-program-and-projects.aspx>
 7. Governor’s Highway Safety Program <https://safety.fhwa.dot.gov/hsip/>
 8. Eat Smart, Move More NC <http://www.eatsmartmovemorenc.com/Funding/Funding.html>
 9. Non-Infrastructure Transportation Alternatives Program <https://connect.ncdot.gov/projects/BikePed/Pages/Non-Infrastructure-Alternatives-Program.aspx>
 10. NC Parks and Recreation Trust Fund PARTF Program <https://www.ncparks.gov/more-about-us/parks-recreation-trust-fund/parks-and-recreation-trust-fund>
 11. NC Regional Trails Program <https://trails.nc.gov/trail-grants>
 12. American Hiking Society <https://americanhiking.org/national-trails-fund/>
 13. AARP Community Challenge <https://www.aarp.org/livable-communities/about/info-2017/aarp-community-challenge-submission-instructions.html>
 14. National Association of Realtors <https://realtorparty.realtor/community-outreach/placemaking>
 15. Better Block Foundation <https://www.betterblock.org/>

