

III. NETWORK RECOMMENDATIONS

Planning of the automobile city focuses on saving time. Planning for the accessible city, on the other hand, focuses on time well spent.

-- Robert Cervero, Chair of City & Regional Planning, UC Berkeley

Introduction

This chapter presents proposed bikeways and bicycle support facilities identified through input from the community, the Plan Advisory Committee, and the needs analysis. The proposed improvements are intended to **make bicycling more comfortable and accessible for bicyclist of all skill levels and trip purposes**. Bicyclists have the same rights and responsibilities as motorists and are allowed to ride on all roads in Cornelius. Modifications to roadways in Cornelius, as well as the addition of off-street pathways, will make bicycling a safer and more viable form of transportation.

Overview of Planning Process

A variety of on and off-street bicycle facilities are recommended due to 1) the range of abilities and comfort levels of bicyclists; 2) the range of conditions for bicycling on different roadway environments; and 3) local preferences identified through the public input process. This section presents an overview of these facility types in order to orient the reader to the network recommendations presented in the following sections. More detailed information of the design of the bicycle facilities presented in this section can be found in the Design Guidelines presented in Chapter 6.

The recommended bicycle network is made up of the following core types of facilities:

Table 3.1 Types of Bikeway Facilities and corresponding Cost per Mile

ON-ROAD FACILITIES	COST PER MILE*
Cycle Tracks	unavailable
Buffered Bicycle Lanes	\$133,170
Bicycle Lanes	\$133,170
Paved Shoulders	\$200,000**
Low Stress Bike Routes	\$25,070
Shared Lane Markings	\$25,070
Signed Bicycle Routes	\$25,070
OFF-ROAD FACILITIES	
Multi-use Paths (also known as greenways and shared use paths)	\$600,000
Sidepaths	\$600,000

*The source for the above costs is the 2013 report, "Costs for Pedestrian and Bicyclist Infrastructure Improvements" by the UNC Highway Safety Research Center (HSRC), prepared for the Federal Highway Administration.

** For paved shoulder improvements, narrowing roadway lane widths can lower project costs by lowering the amount of additional pavement space needed. This should be evaluated in project design on a case-by-case basis.

It is important to note that costs for bicycle and pedestrian infrastructure vary greatly from city to city and site to site. The cost information above should be used only for estimating purposes and not necessarily for determining actual bid prices for a specific infrastructure project.

The recommended strategies for implementing the proposed facilities include road widening, lane narrowing, lane reconfiguration, parking reduction, adding markings/signage, and new construction. These strategies are discussed in further detail in Chapter IV and the Design Guidelines presented in Appendix E. In addition, strategic speed limit reductions and intersection improvements would add to overall bicycle and pedestrian safety and comfort throughout the City.

Bicycle Facility Types

ON-ROAD BICYCLE FACILITIES

On-road bikeway types are used typically on arterial, collector, and sub-collector roadways where motor vehicle traffic volumes or speeds are relatively high. These facility types are ordered hierarchically from greatest degree of bicycle/motor vehicle separation to lowest in the following sections. In general, higher order facilities are preferable on higher-order roadway streets and vice versa.

CYCLE TRACK



A cycle track is an exclusive bike facility that combines the user experience of a separated path with the on-street infrastructure of a conventional bike lane. A cycle track is physically separated from motor traffic and distinct from the sidewalk. Cycle tracks have different forms but all share common elements—they provide space that is intended to be exclusively or primarily used by bicycles, and are separated from motor vehicle travel lanes, parking lanes, and sidewalks. In situations where on-street parking is allowed, cycle tracks are located to the curb-side of the parking (in contrast to bike lanes).

Cycle tracks may be one-way or two-way, and may be at street level, sidewalk level or at an intermediate level. If at sidewalk level, a curb or median separates them from motor traffic, while different pavement color/texture separates the cycle track from the sidewalk. If at street level,

they can be separated from motor traffic by raised medians, on-street parking or bollards.

By separating bicyclists from motor traffic, cycle tracks can offer a higher level of comfort than bike lanes and are attractive to a wider spectrum of the public, including the “interested but concerned” category of cyclists that includes families and children. Intersections and approaches must be carefully designed to promote safety and facilitate left-turns from the right side of the street.

BUFFERED BICYCLE LANES



Buffered bike lanes are conventional bicycle lanes paired with a designated buffer space, separating the bicycle lane from the adjacent motor vehicle travel lane and/or parking lane. Buffered bike lanes follow general guidance for buffered preferential vehicle lanes as per MUTCD guidelines.

Buffered bike lanes are designed to increase the space between the bike lane and the travel lane and/or parked cars, providing more comfortable conditions for bicyclists. This separation can make the facility more attractive for "interested but concerned" as well as the "enthused and confident" cyclists. This treatment is appropriate for bike lanes on roadways with high motor vehicle traffic volumes and speed, adjacent to parking lanes, or a high volume of truck or oversized vehicle traffic.

BICYCLE LANES

A bicycle lane is a portion of the roadway that has been designated by striping, signing, and pavement



markings for the preferential and exclusive use of bicyclists. "Enthusied and confident" cyclists would feel most comfortable on these facilities. Bicycle lanes are always located on both sides of the road (except one way streets), and carry bicyclists in the same direction as adjacent motor vehicle traffic. The minimum width for a bicycle lane is four feet; five- and six-foot bike lanes are typical for collector and arterial roads.

Where bicycle lanes are recommended in this plan, speed limit reduction should be strongly considered.

PAVED SHOULDERS



Typically found in less dense areas, shoulder bikeways are roadways with paved, striped shoulders. While there is no minimum width for paved shoulders, 4' or greater is preferred for cyclists. In addition to the safety and comfort benefits for cyclists, paved shoulders also reduce roadway maintenance, improve roadway drainage, provide a stable walking surface for pedestrians when sidewalks cannot be provided, reduce vehicular crashes, and provide emergency stopping space for broken-down vehicles.

Shoulder bikeways often, but not always, include signage alerting motorists to expect bicycle travel along the roadway. This bike facility is preferred by more experienced cyclists, those who fall in the "strong and fearless" category. Shoulder bikeways should be considered a temporary or rural treatment, with full bike lanes planned for construction if the roadway is widened or completed with curb and gutter.

LOW STRESS BIKE ROUTES



Low stress bike routes, also called bicycle boulevards or neighborhood greenways, are low-volume, low-speed neighborhood streets around core areas of the City modified to enhance bicyclist comfort and safety by using treatments such as signage, pavement markings, traffic calming and/or traffic reduction, and intersection modifications. These bike boulevards are attractive to the less confident or experienced cyclists, those that fall in the category of "interested but concerned." Pedestrian and bicycle cut-throughs (recommended in the following section) can also be integrated into the low stress bike route network to allow for continuous bike travel off of major corridors. These treatments allow through bicycle movements while discouraging motorized through-traffic.

Jurisdictions throughout the country use a wide variety of strategies to determine where specific treatments are applied. While no federal guidelines exist, several best practices have emerged. **At a minimum, neighborhood greenways should include distinctive pavement markings and wayfinding signs.** They can also use combinations of traffic calming, traffic diversion, and intersection treatments to improve the bicycling environment.

The appropriate level of treatment to apply is dependent on roadway conditions, particularly motor vehicle speeds and volumes.

Traffic conditions on low stress bike routes should be monitored to provide guidance on when and where treatments should be implemented. When motor vehicle speeds and volumes or bicyclist delay exceed the preferred limits, additional treatments should be considered.

MARKED, SHARED LANES



A marked shared roadway is a general purpose travel lane marked with shared lane markings (SLM) used to encourage bicycle travel and proper positioning within the lane. Placed in a linear pattern along a corridor (typically every 100-250 feet), shared lane markings make motorists more aware of the potential presence of cyclists; direct cyclists to ride in the proper direction; and remind cyclists to ride further from parked cars to avoid "dooring" collisions.

In constrained conditions, the SLMs are placed in the middle of the lane. On a wide outside lane, the SLMs can be used to promote bicycle travel to the right of motor vehicles. In all conditions, SLMs should be placed outside of the door zone

of parked cars and used on roadways with speed limits of 35 mph or less (below 30 mph preferred).

BIKE ROUTES



Bike routes employ bikeway signage, and may also use pavement markings, to guide bicyclists to popular destinations on low-volume, bike-friendly roadways. Bike routes are distinct from low stress bike routes in that they are mostly recommended as a rural roadway treatment. Like low stress bike routes, bike routes serve as an alternative to roads that are less comfortable for cycling due to higher motor vehicle volumes and/or speeds. They were chosen as part of the network because of the importance of overall system connectivity and connectivity to destinations such as parks, neighborhoods, and schools, but offer shorter connections than do low stress bike routes.

INTERSECTION TREATMENTS

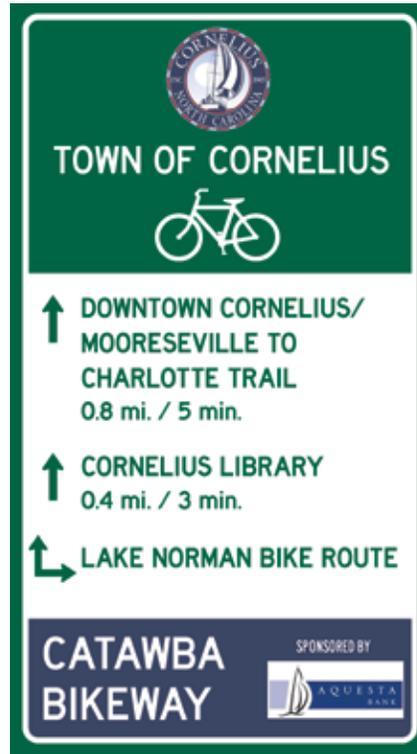


There are a variety of intersection treatments that can be applied to make a safer and more comfortable crossing environment for bicyclists. As seen in the example above, green paint delineates the preferred path of travel for the bicyclist through the intersection and indicates a potential conflict to motorists.

WAYFINDING

Wayfinding is spatial problem solving. Successful wayfinding orients people to their surroundings and informs them on how to best navigate to their destination along preferred bicycle routes. Apart from serving as a guide to destinations, wayfinding increases users’ comfort and accessibility to the bike network. It can offer a sense of safety – familiarizing users with the network and overcoming “barriers to entry” for people who are not frequent bicyclists.

Basic elements to include in wayfinding signs include destinations, distances, and “riding time”. Often the inclusion of riding times dispels common overestimations of time and distance thus encouraging walking or cycling instead of defaulting to the car. Signs should be placed at decision points (where the navigator must choose whether to continue their route or change direction) along bike routes and low stress bike routes or neighborhood greenways. See Appendix B for details on wayfinding sign types, sign placement, and maintenance.



Right: Bicycle wayfinding is not only an important for navigating the bicycle network, but also as an encouragement tool that makes people aware of how easy it can be to bicycle to popular destinations.

OFF-ROAD BICYCLE FACILITIES

Off-road bikeways are intended to create completely separated spaces for pedestrians and bicyclists. These are the preferred facility for novice and average bicyclists. Special consideration must be given to environmental conditions and for all roadway crossings.

MULTI-USE PATH (GREENWAY)



Photo courtesy of charmeck.org

A multi-use path allows for two-way, off-street bicycle use and also may be used by pedestrians, skaters, wheelchair users, joggers and other non-motorized users. These facilities are frequently found in parks, along rivers, beaches, and in greenbelts or utility corridors where there are few conflicts with motorized vehicles. Path facilities can also include amenities such as lighting, signage, and fencing (where appropriate). Key features of multi-use paths include:

1. Frequent access points from the local road network
2. Directional signs to direct users to and from the path.
3. A limited number of at-grade crossings with streets or driveways.
4. Terminating the path where it is easily accessible to and from the street system.
5. Separate treads for pedestrians and bicyclists when heavy use is expected

SIDEPATH



Multi-use paths along roadways, also called Sidepaths, are a type of path that run adjacent to a street. Because of operational concerns it is generally preferable to place paths within independent rights-of-way away from roadways. However, there are situations where existing roads provide the only corridors available. When designed correctly, these facilities have the ability to provide a high level of comfort for pedestrians and bicyclists. However, the AASHTO Guide for the Development of Bicycle Facilities cautions practitioners of the use of two-way sidepaths on urban or suburban streets with many driveways and street crossings. Where implemented, sidepaths should be coupled with strict access management regulations or improvements.

Bikeway Project Development

Bikeway network development utilized a number of different analyses, described in the Existing Conditions section of this plan, and planning judgment to determine what project types are warranted along roadways throughout Cornelius. These recommendations also include new off-street bicycle and pedestrian accommodation recommendations where they serve a major connectivity function in the network. The ultimate goal of the bikeway network is providing connectivity to destinations such as retail centers, job centers, schools, and recreation opportunities for all residents.

NATURE OF RECOMMENDATIONS

Recommended facilities for bicyclists strive to create a safe and comfortable biking environment for users of all ages and abilities and reflect national best practices in considering conditions such as traffic volumes, traffic speeds, and available roadway rights-of-way. Recommendations are considered planning-level, meaning that they should be used as a guide when implementing recommendations. In many cases, more detailed design studies will be required to examine specific site conditions and develop specific designs that reflect local conditions and constraints. In addition, these maps reflect the long-term vision for the network—implementation will not happen overnight. However, this Plan also contains an Implementation Plan which provides a roadmap for implementing recommendations in a logical manner. The Implementation Plan prioritizes the most feasible projects that provide the greatest return in terms of need, safety improvement, and costs. The Implementation Plan also projects

costs, develops a timeline for implementation and provides other resources such as potential funding sources.

RECOMMENDATIONS OVERVIEW

The tables below and on the following pages provide a summary of improvements shown in maps on the following pages, broken down by miles for linear facilities, or number of locations for spot improvements. Refer to the previous section for an overview of the different recommended improvement types. In some cases, the type of bicycle facility recommended for a particular road segment requires further study and is specified on the map as a "dedicated bikeway." This designation indicates that a facility dedicated to bicycles is recommended, but what form it takes has yet to be determined. It may be specified, through further study of conditions and needs, as a bike lane, buffered bike lane, cycle track, or sidepath.

Table 3.2 Mileage of Existing and Recommended Bikeway Facilities

FACILITY TYPE	MILES
Cycle Track	TBD
Bike Lanes	18.8
Paved Shoulders	5.1
Low Stress Bike Routes	33.5
Marked, Shared Lanes	6.5
Greenway	16.8
Sidepath	23.4
Bike-Ped Connectors	2.2
Total Mileage	106.3

Table 3.3 Recommended Dedicated Bikeways

	ROAD	FROM	TO	LENGTH (FEET)	LENGTH (MILES)
1	Jetton Rd	John Connors Rd	West Catawba Ave	10,343	1.96
2	Jetton Rd/Sefton Park Rd	West Catawba Ave	Liverpool Pkwy	4,119	0.78
3	West Catawba Ave	Jetton Rd	Sam Furr Rd	12,414	2.35
4	West Catawba Ave	Torrence Chapel Rd	Jetton Rd	2,487	0.94
Total Recommended Mileage					6.03

Table 3.4 Recommended Bicycle Lanes

ROAD	FROM	TO	LENGTH (FEET)	LENGTH (MILES)
Bethel Church Rd	West Catawba Ave	Bethelwood Ln	4,997	0.95
Bailey Rd	Statesville Rd	Poole Place	3,058	0.58
Bailey Rd extension	Statesville Rd	Poole Place		
Bailey Rd	Poole Place	NC Route 115	5,895	1.12
Bailey Rd	NC Route 115	South Prong Rocky River Greenway	11,454	2.17
Catawba Ave	Mulberry Dr	Main St	1,075	0.20
Knox Rd	Nautique Blvd	Torrence Chapel Rd	3,213	0.61
Liverpool Pkwy	West Catawba Ave	Sefton Park Rd	1,598	0.30
Main St/NC Route 115	Catawba Ave	Potts St	4,422	0.84
NC Route 115/Old Statesville Rd	Catawba Ave	Will Knox Rd	12,105	2.29
Northcross Dr extension	Forest Shadow Cir	Eagle Ridge Way	5,096	0.97
Statesville Rd/US Route 21	Catawba Ave	Northcross Ctr Ct	13,289	2.52
Torrence Chapel Rd	West Catawba Ave	Country Club Dr	7,753	1.47
Washam Potts Rd	NC Route 115	Bailey Rd	7,831	1.48
Westmoreland Rd	Washam Potts Rd	I-77 bridge	2,568	0.49
Westmoreland Rd	I-77 bridge	McDowell Creek Greenway	548	0.10
Westmoreland Rd	Lake Pines Dr	West Catawba Ave	2,319	0.44
Total Recommended Mileage				16.53

Table 3.5 Recommended Paved Shoulders

ROAD	FROM	TO	LENGTH (FEET)	LENGTH (MILES)
Bailey Rd	South Prong Rocky River Greenway	Mayes Rd	4,007	0.76
Mayes Rd	Old Statesville Rd	Sam Furr Rd	11,223	2.13
Total Recommended Mileage				2.89

Bike!Cornelius

Cornelius, NC Bicycle Master Plan Bicycle Facility Recommendations

-  Bike-Ped Connectors
-  Greenways-Existing
-  Greenways-Future
-  Greenways-Funded
-  Greenways-Under Development
-  Sidepath-Existing
-  Sidepath-Proposed
-  JettonMTB
-  Bailey Rd Park Nature_Trail
-  Robbins Park Nature Trail
-  Bike Lanes-Existing
-  Bike Lanes-Proposed
-  Paved Shoulder-Proposed
-  Marked, Shared Lanes-Proposed
-  Dedicated Bikeways-Proposed
-  Low Stress Bike Route-Proposed
-  Road Bike Routes
-  Natural Surface Trail
-  Paved Park Trail
-  Park Facilities
-  Civic Land Use
-  Lakes
-  Cornelius SOI
-  Railroads
-  Creeks and Streams
-  Points of Interest
-  Recreation Center
-  Park and Ride

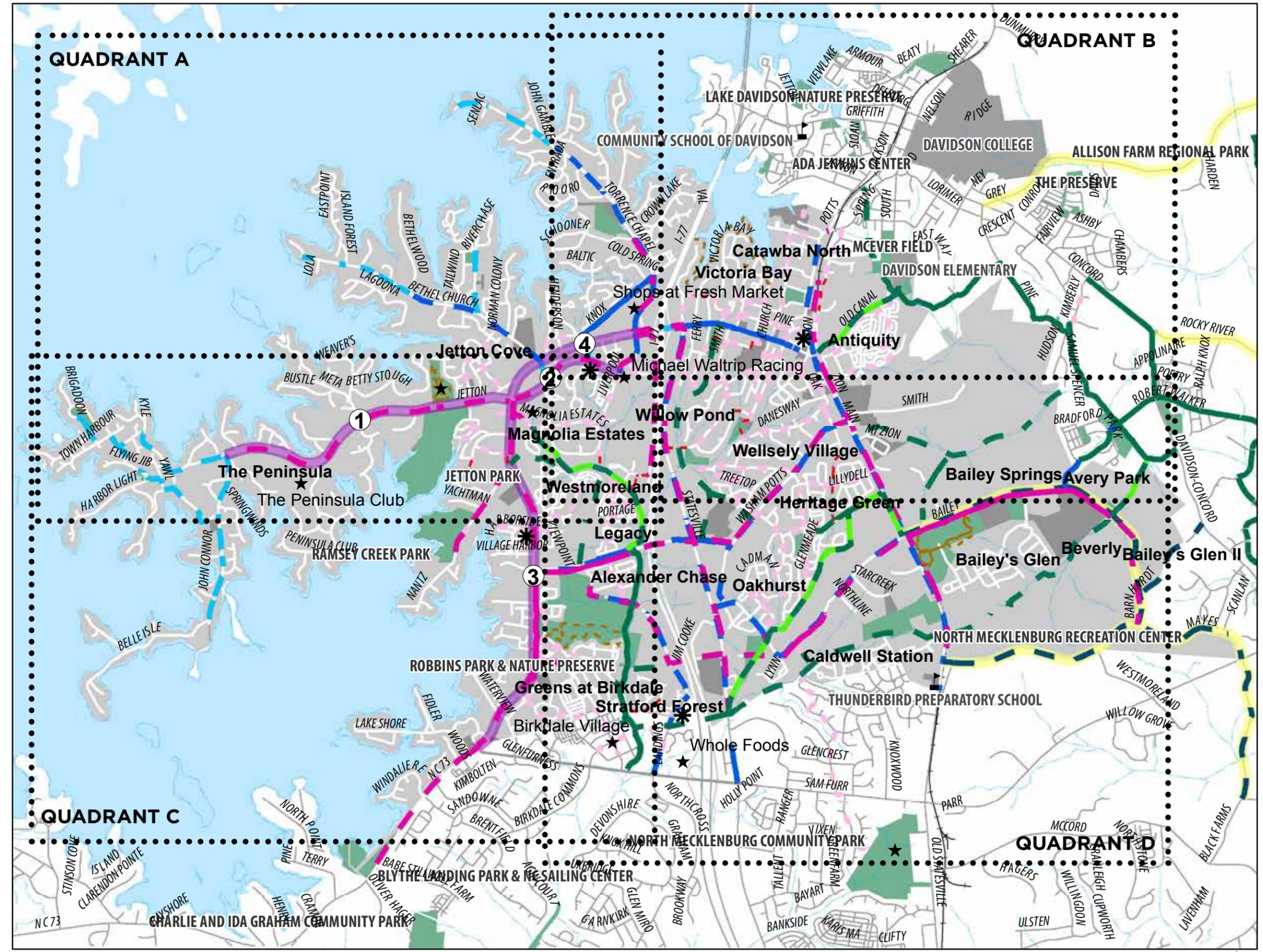


Figure 3.1. Comprehensive Bike!Cornelius Recommendations Map

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Bike!Cornelius

Cornelius, NC Bicycle Master Plan

Bicycle Facility Recommendations - A

-  Bike-Ped Connectors
-  Greenways-Existing
-  Greenways-Future
-  Greenways-Funded
-  Greenways-Under Development
-  Sidepath-Existing
-  Sidepath-Proposed
-  Bike Lanes-Existing
-  Bike Lanes-Proposed
-  Paved Shoulder-Proposed
-  Marked, Shared Lanes-Proposed
-  Dedicated Bikeways-Proposed
-  Low Stress Bike Route-Proposed
-  Road Bike Routes
-  Natural Surface Trail
-  Paved Park Trail
-  Park Facilities
-  Civic Land Use
-  Lakes
-  Cornelius SOI
-  Railroads
-  Creeks and Streams
-  Points of Interest
-  Recreation Center
-  Park and Ride

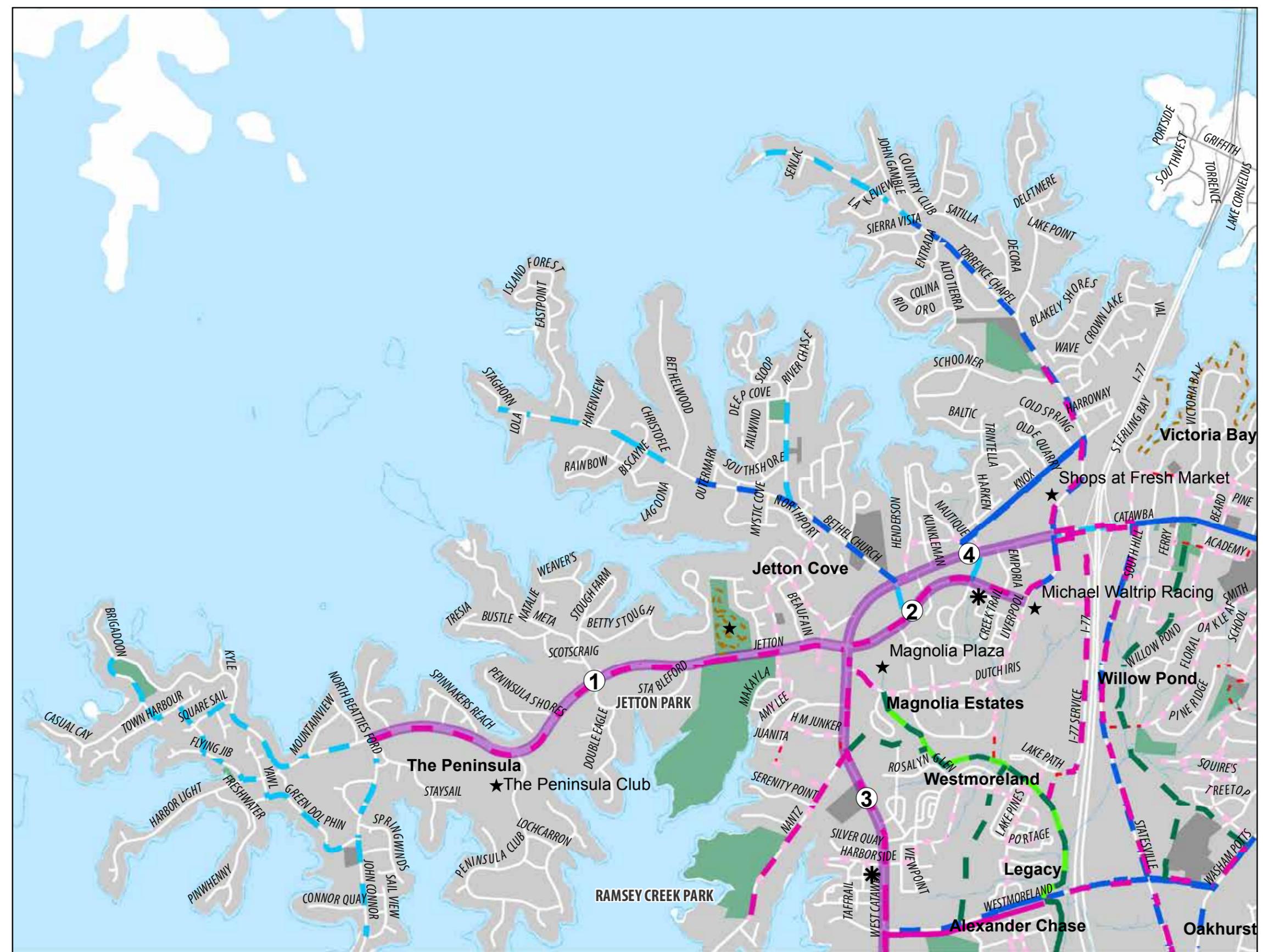
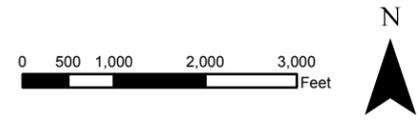


Figure 3.2. Comprehensive Bike!Cornelius Recommendations Map: Quadrant A

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Bike!Cornelius

Cornelius, NC Bicycle Master Plan

Bicycle Facility Recommendations - B

-  Bike-Ped Connectors
-  Greenways-Existing
-  Greenways-Future
-  Greenways-Funded
-  Greenways-Under Development
-  Sidepath-Existing
-  Sidepath-Proposed
-  Bike Lanes-Existing
-  Bike Lanes-Proposed
-  Paved Shoulder-Proposed
-  Marked, Shared Lanes-Proposed
-  Dedicated Bikeways-Proposed
-  Low Stress Bike Route-Proposed
-  Road Bike Routes
-  Natural Surface Trail
-  Paved Park Trail
-  Park Facilities
-  Civic Land Use
-  Lakes
-  Cornelius SOI
-  Railroads
-  Creeks and Streams
-  Points of Interest
-  Recreation Center
-  Park and Ride

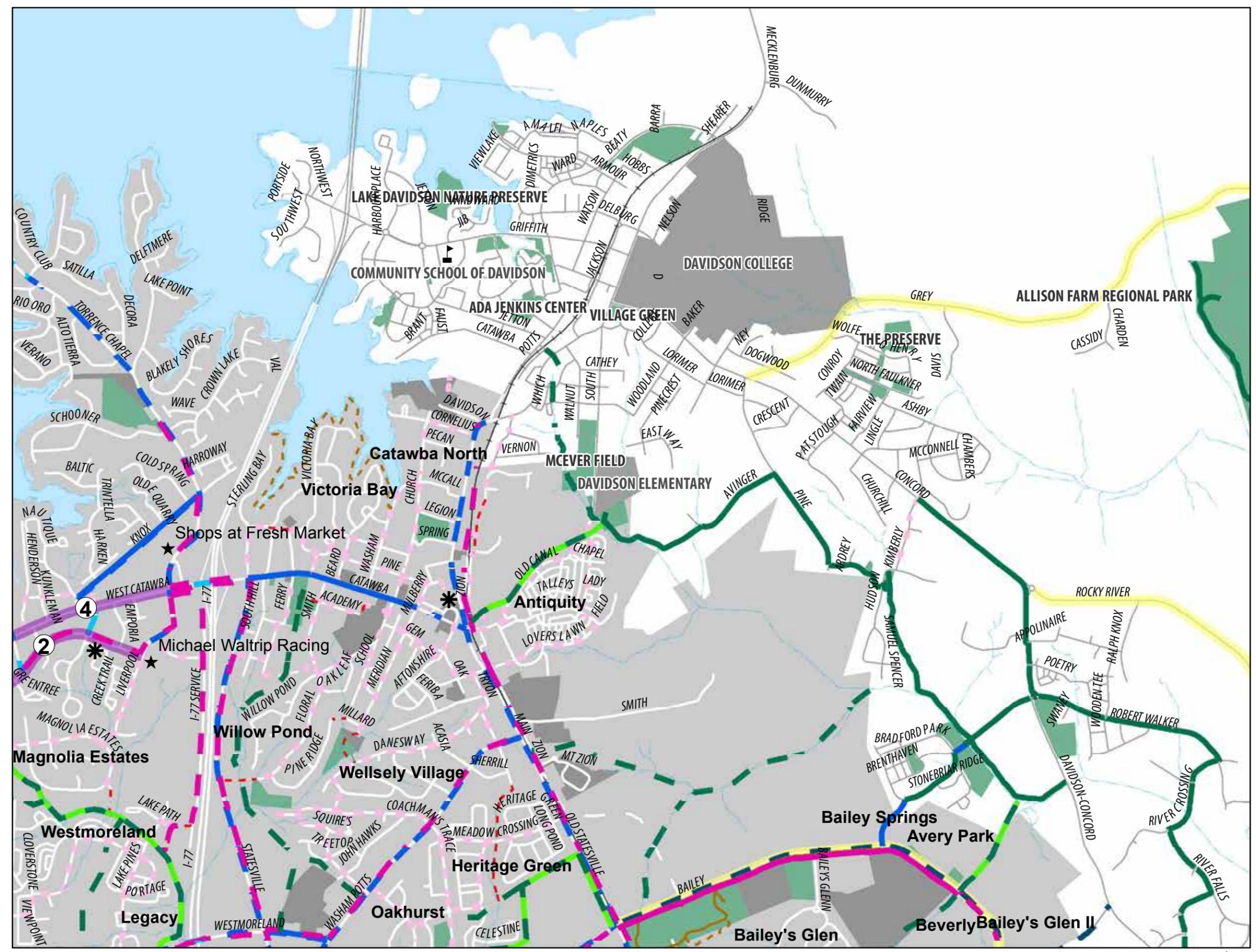
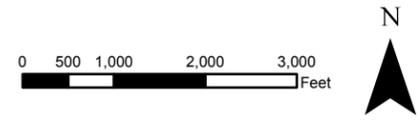


Figure 3.3. Comprehensive Bike!Cornelius Recommendations Map: Quadrant B

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Bike!Cornelius

Cornelius, NC

Bicycle Master Plan

Bicycle Facility Recommendations - C

-  Bike-Ped Connectors
-  Greenways-Existing
-  Greenways-Future
-  Greenways-Funded
-  Greenways-Under Development
-  Sidepath-Existing
-  Sidepath-Proposed
-  Bike Lanes-Existing
-  Bike Lanes-Proposed
-  Paved Shoulder-Proposed
-  Marked, Shared Lanes-Proposed
-  Dedicated Bikeways-Proposed
-  Low Stress Bike Route-Proposed
-  Road Bike Routes
-  Natural Surface Trail
-  Paved Park Trail
-  Park Facilities
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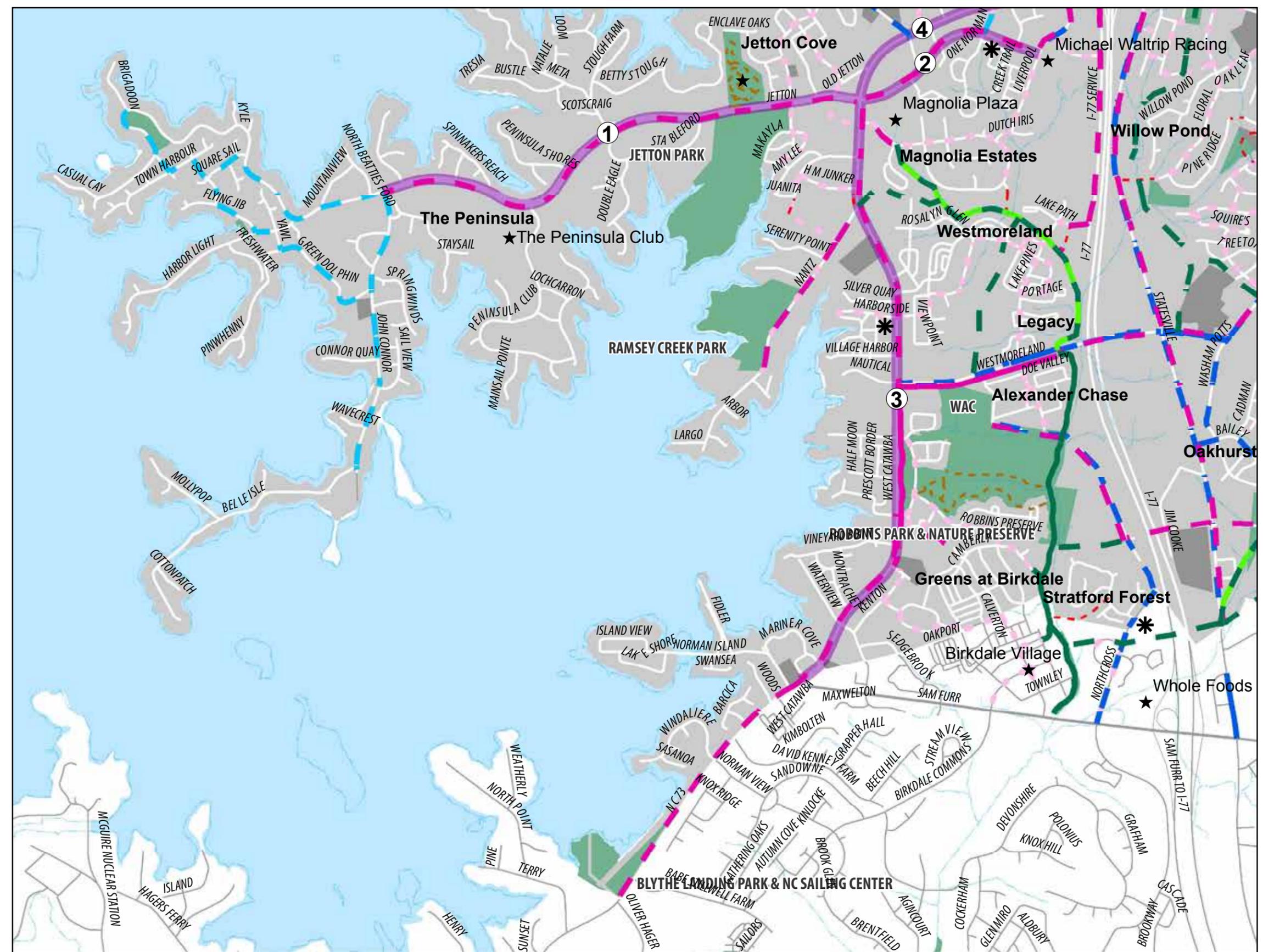
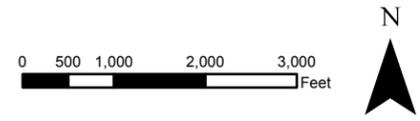


Figure 3.4. Comprehensive Bike!Cornelius Recommendations Map: Quadrant C

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Bike!Cornelius

Cornelius, NC Bicycle Master Plan

Bicycle Facility Recommendations - D

-  Bike-Ped Connectors
-  Greenways-Existing
-  Greenways-Future
-  Greenways-Funded
-  Greenways-Under Development
-  Sidepath-Existing
-  Sidepath-Proposed
-  Bike Lanes-Existing
-  Bike Lanes-Proposed
-  Paved Shoulder-Proposed
-  Marked, Shared Lanes-Proposed
-  Dedicated Bikeways-Proposed
-  Low Stress Bike Route-Proposed
-  Road Bike Routes
-  Natural Surface Trail
-  Paved Park Trail
-  Park Facilities
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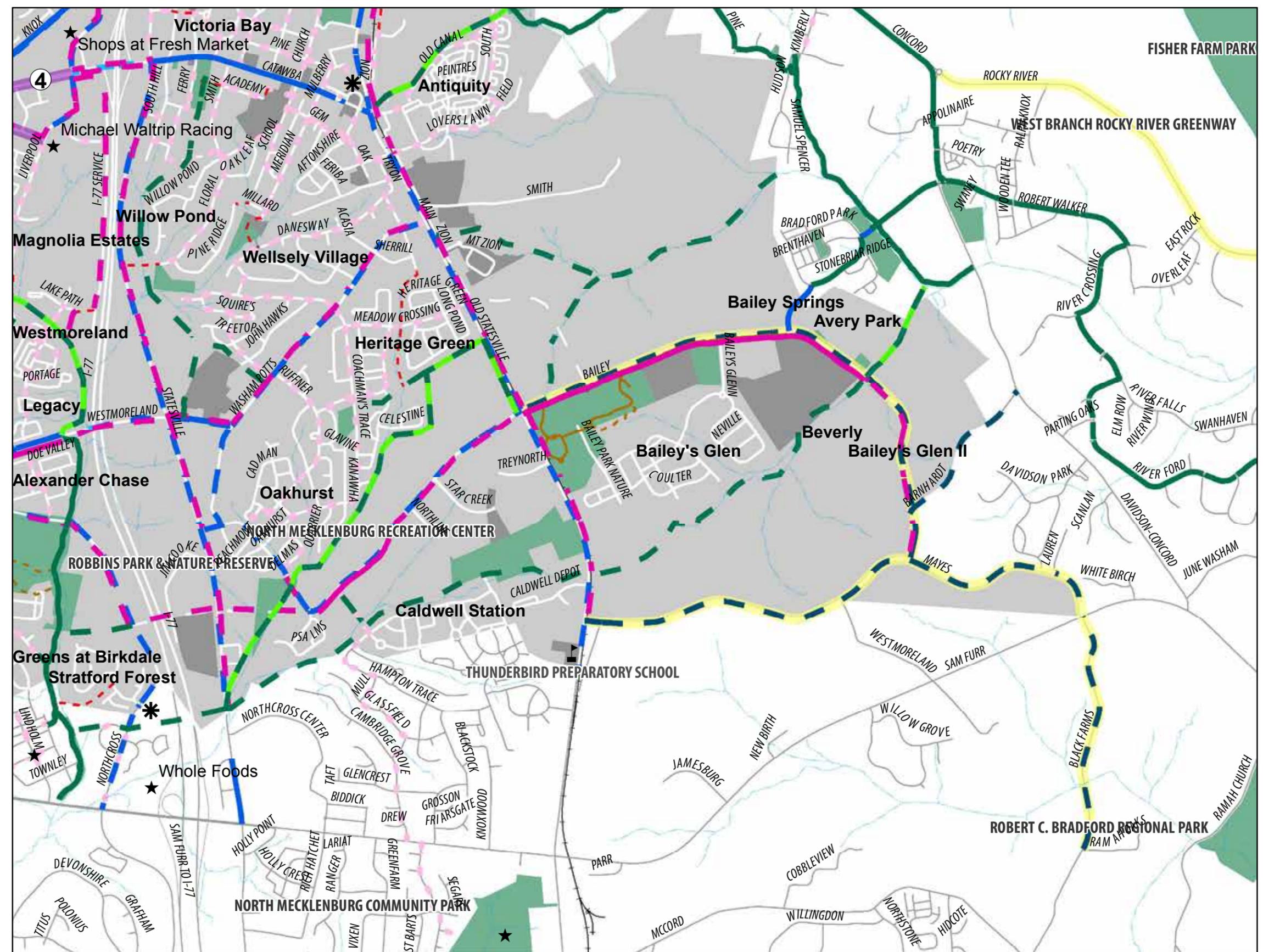
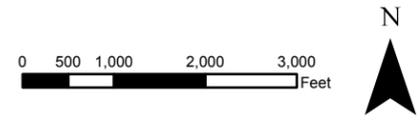


Figure 3.5. Comprehensive Bike!Cornelius Recommendations Map: Quadrant D

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Bike!Cornelius

Cornelius, NC

Bicycle Master Plan

Bicycle Facility

Recommendations

Dedicated On Road Facilities

-  Bike Lanes-Existing
-  Bike Lanes-Proposed
-  Paved Shoulder-Proposed
-  Dedicated Bikeways-Proposed
-  Park Facilities
-  Civic Land Use
-  Lakes
-  Cornelius SOI
-  Railroads
-  Creeks and Streams

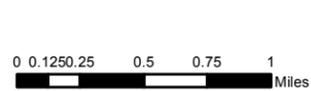
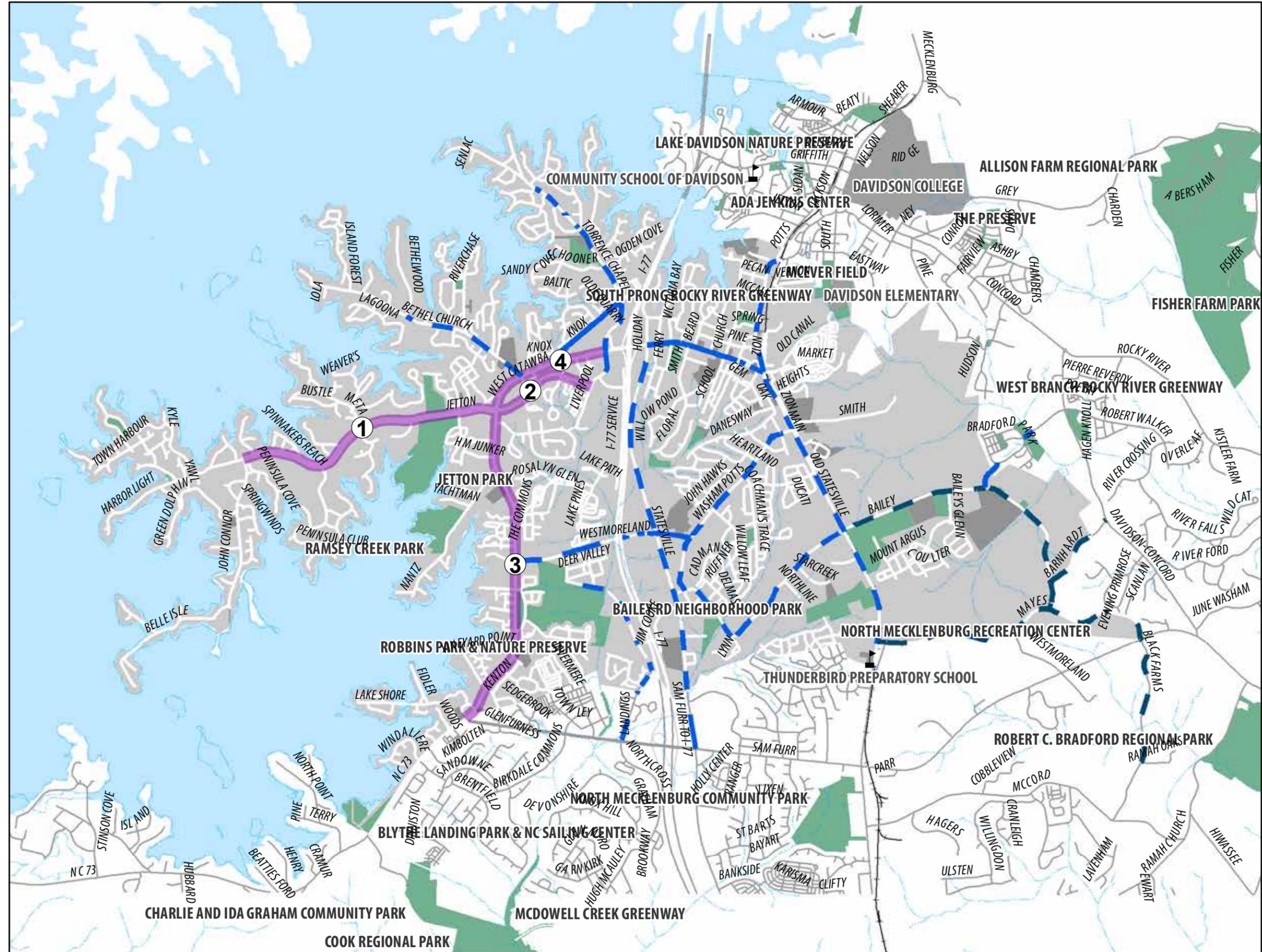


Figure 3.6. Dedicated On Road Facilities Map (Bike Lanes and Paved Shoulders)

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Bike!Cornelius

Cornelius, NC Bicycle Master Plan

Bicycle Facility
Recommendations
Shared On Road Facilities

-  Marked, Shared Lanes-Proposed
-  Low Stress Bike Route-Proposed
-  Park Facilities
-  Civic Land Use
-  Lakes
-  Cornelius SOI
-  Railroads
-  Creeks and Streams

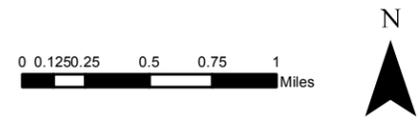
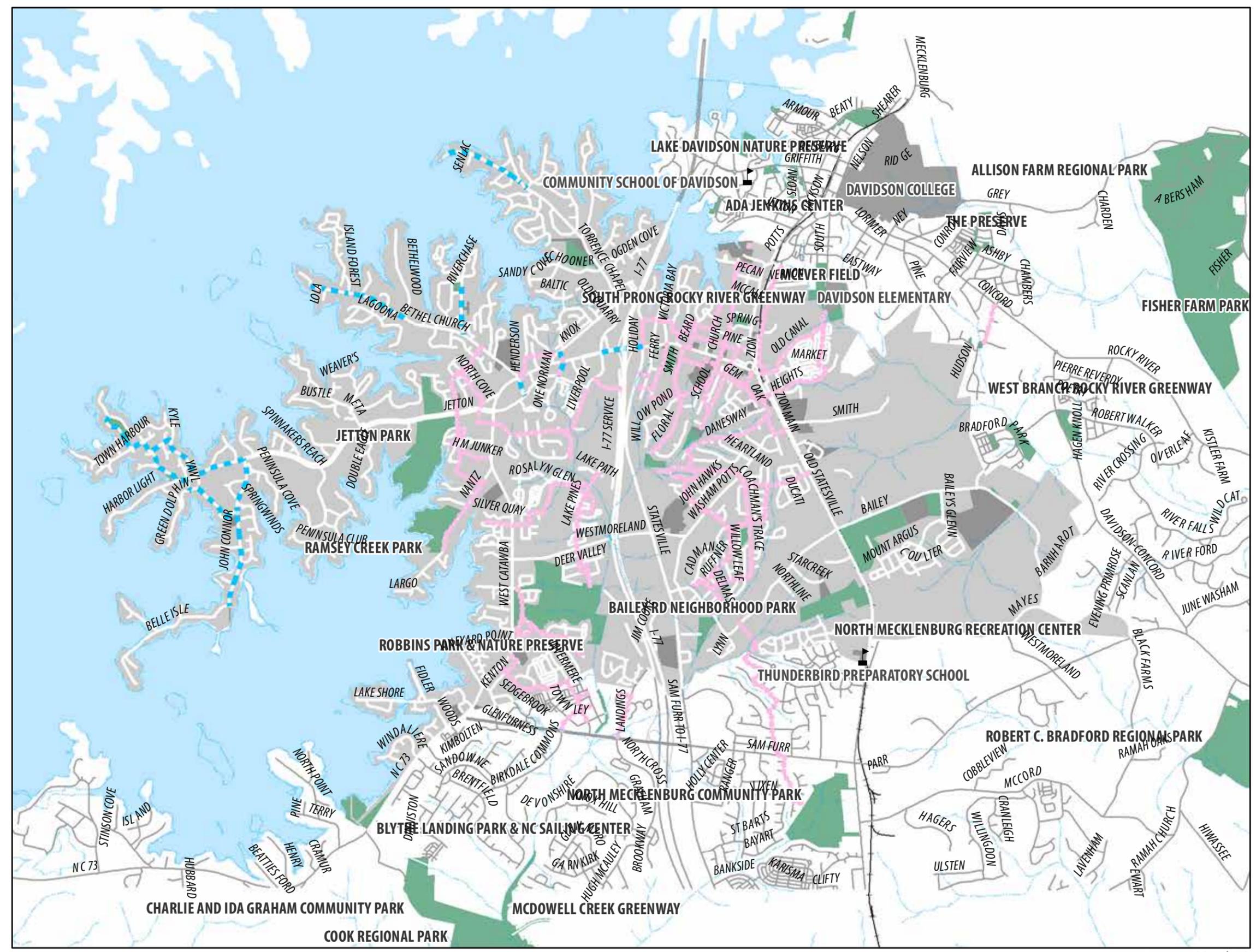


Figure 3.7. Shared On Road Facilities Map (Marked, Shared Roadways + Low Stress Bike Routes)

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Table 3.6 Recommended Marked, Shared Roadways

ROAD	FROM	TO	LENGTH (FT) (ROUNDED)	LENGTH (MI) (ROUNDED)
America Cup Rd	Town Harbour Rd	Flying Jib Rd	1,064	0.21
Bethel Church Rd	Bethelwood Ln	Staghorn Ct	3,838	0.73
Bethel Church Rd	Jetton Rd ext.	West Catawba Ave	752	0.14
Catawba Ave	Liverpool Pkwy	Statesville Rd	1,587	0.30
Flat Shoals Dr	Town Harbour Rd	Jetton Rd	455	0.09
Flying Jib Rd	America Cup Rd	Harbor Light Blvd	1,009	0.19
Green Dolphin Ln	Yawl Rd	John Connor Rd	2,453	0.46
Harbor Light Blvd	Flying Jib Rd	Yawl Rd	404	0.08
Jetton Rd	John Connor Rd	Square Sail Rd	3,574	0.68
Jetton Rd	Flat Shoals Dr	Brigadoon Pl	1,228	0.23
John Connor Rd	Jetton Rd	south terminus	5,744	1.09
One Norman Dr	Sefton Park Rd	Knox Rd	993	0.19
Square Sail Rd	Jetton Rd	America Cup Rd	946	0.18
Torrence Chapel Rd	Country Club Dr	west terminus	3,631	0.69
Town Harbour Rd	America Cup Rd	Flat Shoals Dr	526	0.10
Walter Henderson Rd	Bethel Church Rd	Deep Cove Ct	2,093	0.40
Westmoreland Rd	I-77 bridge		330	0.63
Yawl Rd	Harbor Light Blvd	Green Dolphin Ln	402	0.08
Total Recommended Mileage				6.47

Table 3.7 Recommended Bike-Ped Connectors

CONNECTION FROM	TO	LENGTH (FEET)	LENGTH (MILES)
Meridian St	Danesway Lane	890	0.17
Floral Ln	Statesville Rd	758	0.14
I-77 service rd/Lake Path Dr	McDowell Creek Greenway	1,004	0.19
English Daisy Dr	McDowell Creek Greenway	463	0.09
Summerbrook Dr	Zion Ave	1,113	0.21
Academy St	Cornelius Elem. School driveway	249	0.05
Academy St	S Ferry St	588	0.11
N Ferry St	Sterling Bay Ln	448	0.08
H. M. Junker Dr	Nantz Rd	440	0.08
Harbor View Dr	long driveway off Nantz Rd	368	0.07
Pine Ridge Dr	Millard St	285	0.05
Barnette Ave	Caldwell Station Creek Greenway	2,519	0.48
Forest Shadow Circle	McDowell Creek Greenway	1,349	0.26
Total Recommended Mileage			2.24

Table 3.8 Recommended Low Stress Bike Routes

ROAD	FROM	TO	LENGTH (FEET)	LENGTH (MILES)
Charles Towne Lane	Bethel Church Rd	Jetton Rd	2,977	0.56
North Cove Rd	Charles Towne Ln	Old Jetton Rd	1,519	0.29
Lake Norman Cove Dr	Jetton Rd	Makayla Ln	982	0.19
Makayla Ln	Lake Norman Cove	Julian St	1,019	0.19
H.M. Junker Dr	Harbor View Dr	West Catawba Ave	1,194	0.22
Nantz Rd	West Catawba Ave	Ramsey Creek Park	3,826	0.72
Chandler’s Landing Dr	The Commons Blvd	Rosalyn Glen Rd	1,730	0.33
Rosalyn Glen Rd	Chandler’s Landing Dr	Lake Pines Dr	1,360	0.26
Lake Pines Dr	Lake Path Dr	Westmoreland Dr	3,015	0.57
Harbor Walk Dr	Rosalyn Glen Rd	Lake Pines Dr	566	0.11
Lake Path Dr	Lake Pines Dr	eastern terminus	242	0.05
Chartwell Center Dr	Liverpool Pkwy	I-77 Service Rd	1,119	0.21
Magnolia Estates Dr	West Catawba Ave	English Daisy Dr	3,875	0.73
Magnolia Estates extension	West Catawba Ave	Jetton Rd	1,072	0.20
One Norman Dr	Knox Rd	Sefton Park Rd	993	0.19
Henderson Rd	Knox Rd	West Catwba Ave	699	0.13
Amberside Rd E	Deer Valley Dr	south terminus	840	0.16
Amberside Rd E extension	south terminus of existing road	new road through Robbins Park & Nature Preserve	92	0.02
Robbins Crescent Dr	West Catawba Ave	West Catawba Ave	1,930	0.37
Henry Lee Knox Ln	Jettie Robbins Rd	Robbins Ridge Rd	727	0.14
Robbins Ridge Rd	Robbins Crescent Dr	Preserve Pond Rd	1,196	0.23
Camberly Rd	Pennington Dr	east terminus	902	0.17
Kenton Dr	Copley Dr	Dunmore Dr	641	0.12
Liverpool Pkwy	Sefton Park Rd	Dutch Iris Ln	4,938	0.94
New Road	Harbor View Dr	West Catawba Ave	1,391	0.26
need to complete after Town of Cornelius’s final estimates...		
Total Recommended Mileage				33.5

Table 3.9 Recommended Greenways

GREENWAY	FROM	TO	LENGTH (FEET)	LENGTH (MILES)
Antiquity Greenway (GW1)	Catawba Ave	South Prong Rocky River Greenway	3,405	0.64
Antiquity Greenway Spur	Antiquity Gwy	Potts St	4,175	0.79
Caldwell Station Creek Greenway	Statesville Rd	Old Statesville Rd	11,480	2.17
Caldwell Station Creek (South) Greenway (GW9)	Statesville Rd	Old Statesville Rd/ NC 115	9,146	1.73
Glen Oak Green Park Connector (GW8)	Caldwell St Cr Gwy near Heritage Green Dr	Coachmans Trace	1,624	0.31
McDowell Creek Greenway Phase 2 (GW3)	Westmoreland Rd	Magnolia Estates Dr	6,608	1.25
Nantz Road Connector Greenway (GW11)	McDowell Ck Gwy near Covedale Crossings	West Catawba Ave at Nantz Rd	1,962	0.37
North Bailey Rd Greenway (GW6)	Main St/NC 115	South Prong Rocky River Greenway	8,678	1.64
North Bailey Rd to Bailey Rd Connector (GW7)	Bailey Rd	Greenway 6	2,759	0.52
Smithville Park to JV Washam Greenway/Linear Park (GW4)	Westmoreland Rd	Catawba Ave	8,157	1.54
Smithville Park to JV Washam Greenway Spur	Washam Potts Rd	Smithville to J. V. Washam Gwy	1,705	0.32
South Bailey Rd Greenway (GW2)	Bailey Rd	South Prong Rocky River Greenway	2,173	0.41
South Bailey Rd Greenway Phase 2 (GW10)	Old Statesville Rd/NC 115	Bailey Rd	7,267	1.38
South Bailey Rd Greenway Phase 2 Spur	S Bailey Rd Gwy	Bailey Rd Park	3,738	0.71
Stratford Forest Greenway (GW14)	Northcross Dr extension	McDowell Ck Gwy	1,523	0.29
Westmoreland Park Greenway (GW13)	McDowell Ck Gwy near Westmoreland Lake Dr	Westmoreland Rd	3,254	0.62
Unnamed Greenway	McDowell Creek Greenway	Caldwell Station Creek Greenway	3,071	0.58
Total Recommended Mileage			15.28	

(**Bold** are already under development or funded. Numbers in parentheses (GW#) correspond to greenway recommendations from the Comprehensive Parks & Greenways Master Plan)

GREENWAYS/MULTI-USE PATHS

The Town of Cornelius Parks, Arts, Recreation and Culture Department updated the Town of Cornelius’s Comprehensive Parks & Greenways Master Plan, which was completed with the Town Board approval in June 2015. The Parks & Greenways Master Plan recommends a total of 38.4 miles of greenways and sidepaths. The proposed greenway network includes segments of the regional Carolina Thread Trail and the Mooresville to Charlotte Trail. An overarching recommendation of the Plan is the “Emerald Necklace,” which is an approximately 12.25-mile loop of separated bicycle and pedestrian facilities. The greenways are identified in Figure 3.10.

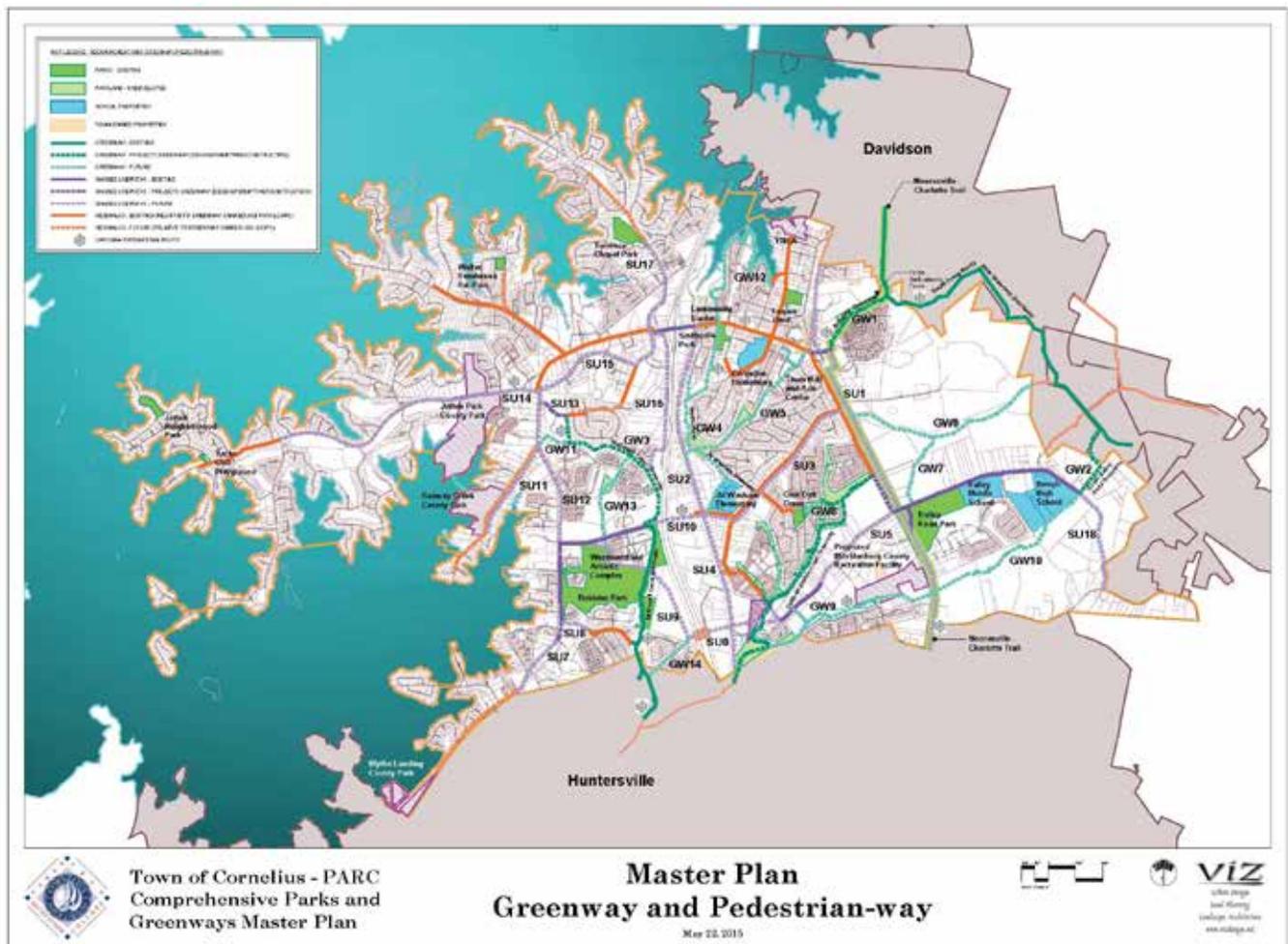


Figure 3.8. The Town of Cornelius’s Comprehensive Parks & Greenways Master Plan (2015).

Table 3.10 Recommended Sidepaths

ROAD	FROM	TO	LENGTH (FEET)	LENGTH (MILES)
Bailey Rd	Poole Place	Delmas Dr	857	0.16
Bailey Rd	Old Statesville Rd	south of Northline Dr	3,786	0.72
Bailey Rd	S Prong W Rocky River Tributary	Mayes Rd	3,970	0.75
Bailey Rd ext. (new roadway)	Bailey Rd/Poole Place	Northcross Rd ext.	5,093	0.96
I-77 service road	Liverpool Pkwy	Chartown Dr	5,047	0.96
Invermere Ave (new roadway)	Invermere Ave	Jettie Robbins Rd	1,177	0.22
Jetton Rd (Phase 1)	West Catawba Ave	Jetton Park Rd	7,820	1.48
Jetton Rd (Phase 2)	Jetton Park Rd	John Connor Rd	2,456	0.47
Jetton Rd ext./Sefton Park Rd	West Catawba Ave	Liverpool Pkwy	3,949	0.75
Liverpool Pkwy	Sefton Park Rd	West Catawba Ave	1,518	0.29
Magnolia Estates Dr	West Catawba Ave	McDowell Creek Greenway	841	0.16
Main St/NC Route 115	Cornelius St	Potts St	492	0.09
Nantz Rd	West Catawba Ave	Ramsey Creek Park	3,755	0.71
Northcross Dr ext. (new roadway)	Bailey Rd ext.	Eagleridge Way Ln	4,298	0.81
Old Statesville Rd/NC Route 115	Washam Potts Rd	Mayes Rd	7,900	1.50
Sam Furr Rd	West Catawba Ave	Oliver Hager Rd	5,437	1.03
Statesville Rd	Catawba Ave	Northcross Ctr Ct	13,180	2.50
Torrence Chapel Rd	West Catawba Ave	Torrence Chapel Park	3,743	0.71
Washam Potts Rd	Westmoreland Rd	Main St/NC Route 115	5,656	1.07
West Catawba Ave	Liverpool Pkwy	Statesville Rd	1,621	0.31
West Catawba Ave	Jetton Rd	Westmoreland Rd	5,778	1.09
West Catawba Ave	Bluff Point Rd	Sam Furr Rd	4,222	0.80
Westmoreland Rd	McDowell Creek Greenway	Washam Potts Rd	6,939	1.31
Zion Ave	south terminus	north terminus	6,340	1.20
Total Recommended Mileage				20.5

THE EMERALD NECKLACE

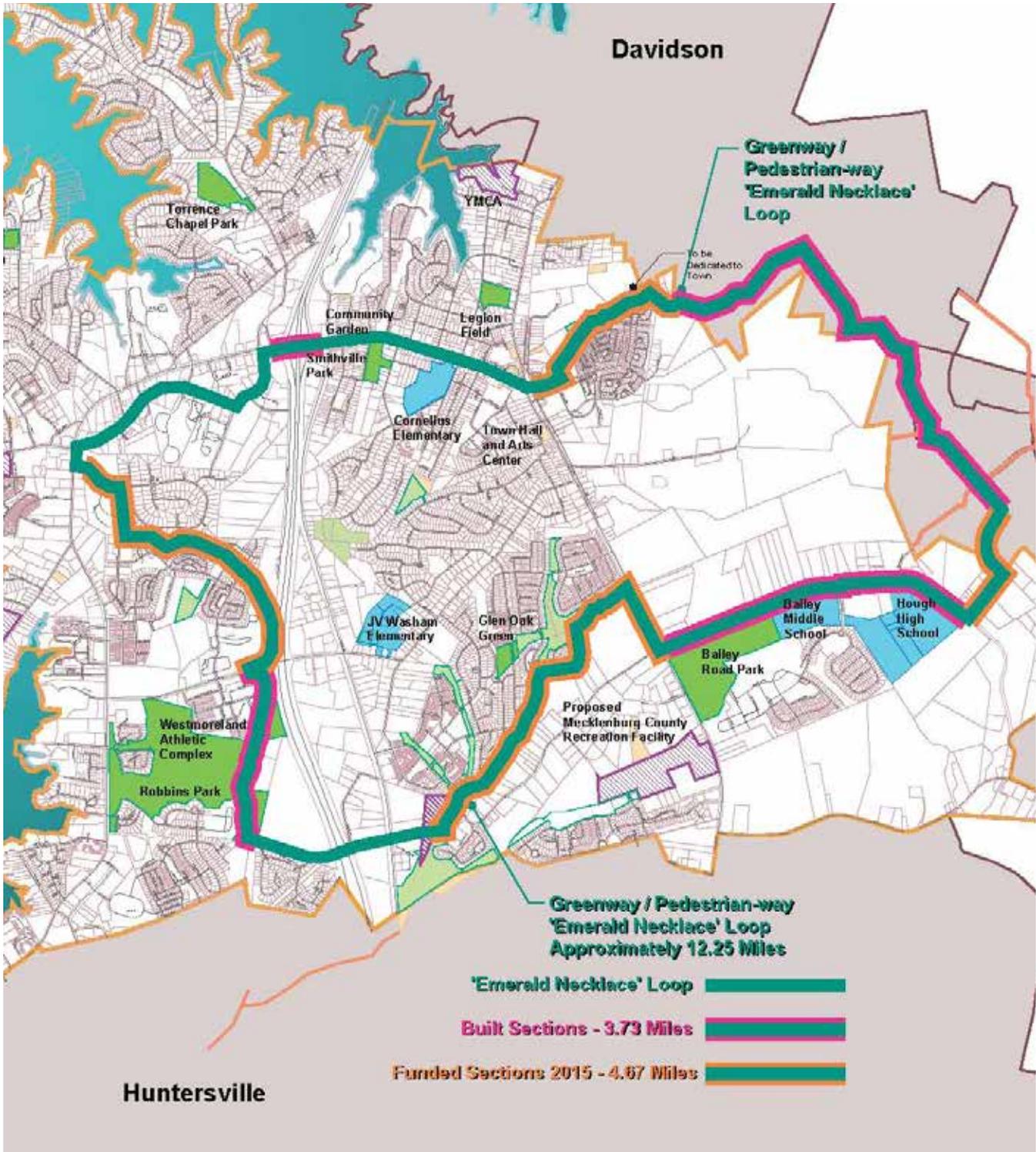
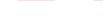
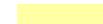
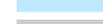


Figure 3.9. "Emerald Necklace" from the Town of Cornelius's Comprehensive Parks & Greenways Master Plan (2015).

Bike!Cornelius

Cornelius, NC Bicycle Master Plan Emerald Necklace

-  Bike-Ped Connectors
-  Emerald Necklace
-  Emerald Necklace- interim
-  Greenways-Existing
-  Greenways-Future
-  Greenways-Funded
-  Greenways-Under Development
-  Sidepath-Existing
-  Sidepath-Proposed
-  Bike Lanes-Existing
-  Bike Lanes-Proposed
-  Paved Shoulder-Proposed
-  Marked, Shared Lanes-Proposed
-  Dedicated Bikeways-Proposed
-  Low Stress Bike Route-Proposed
-  Road Bike Routes
-  Natural Surface Trail
-  Paved Park Trail
-  Park Facilities
-  Civic Land Use
-  Lakes
-  Cornelius SOI
-  Railroads
-  Creeks and Streams

0 0.0625 0.125 0.25 0.375 0.5 Miles

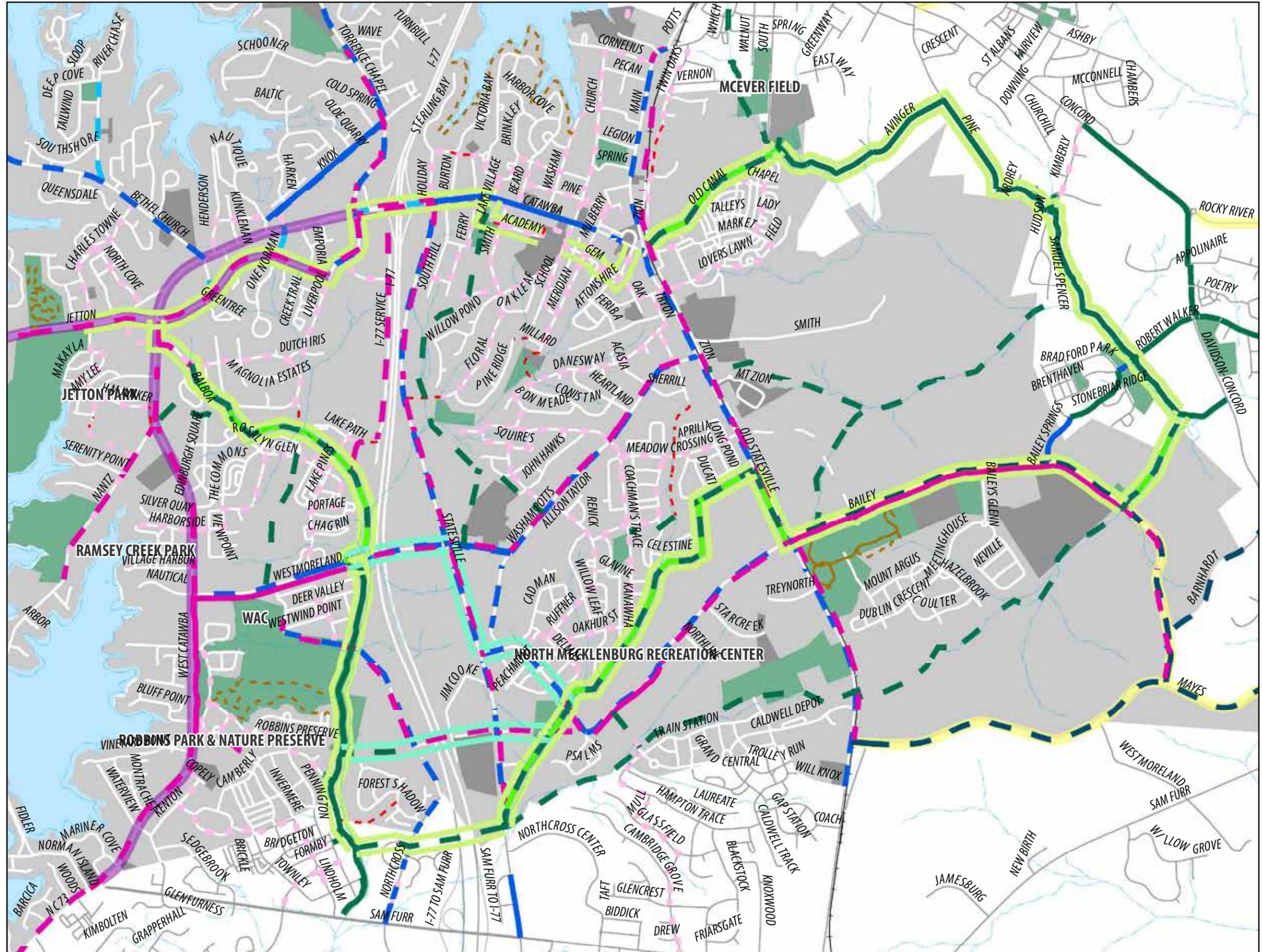


Figure 3.10. Emerald Necklace Map

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Bike!Cornelius

Cornelius, NC Bicycle Master Plan

Bicycle Facility Recommendations Multi-Use Paths

-  Bike-Ped Connectors
-  Emerald Necklace
-  Emerald Necklace- interim
-  Greenways-Existing
-  Greenways-Future
-  Greenways-Funded
-  Greenways-Under Development
-  Sidepath-Existing
-  Sidepath-Proposed
-  Natural Surface Trail
-  Paved Park Trail
-  Park Facilities
-  Civic Land Use
-  Lakes
-  Cornelius SOI
-  Railroads
-  Creeks and Streams
-  Potential Greenway crossing of I-77 as called for by the Cornelius Pedestrian Plan

0 0.125 0.25 0.5 0.75 1 Miles

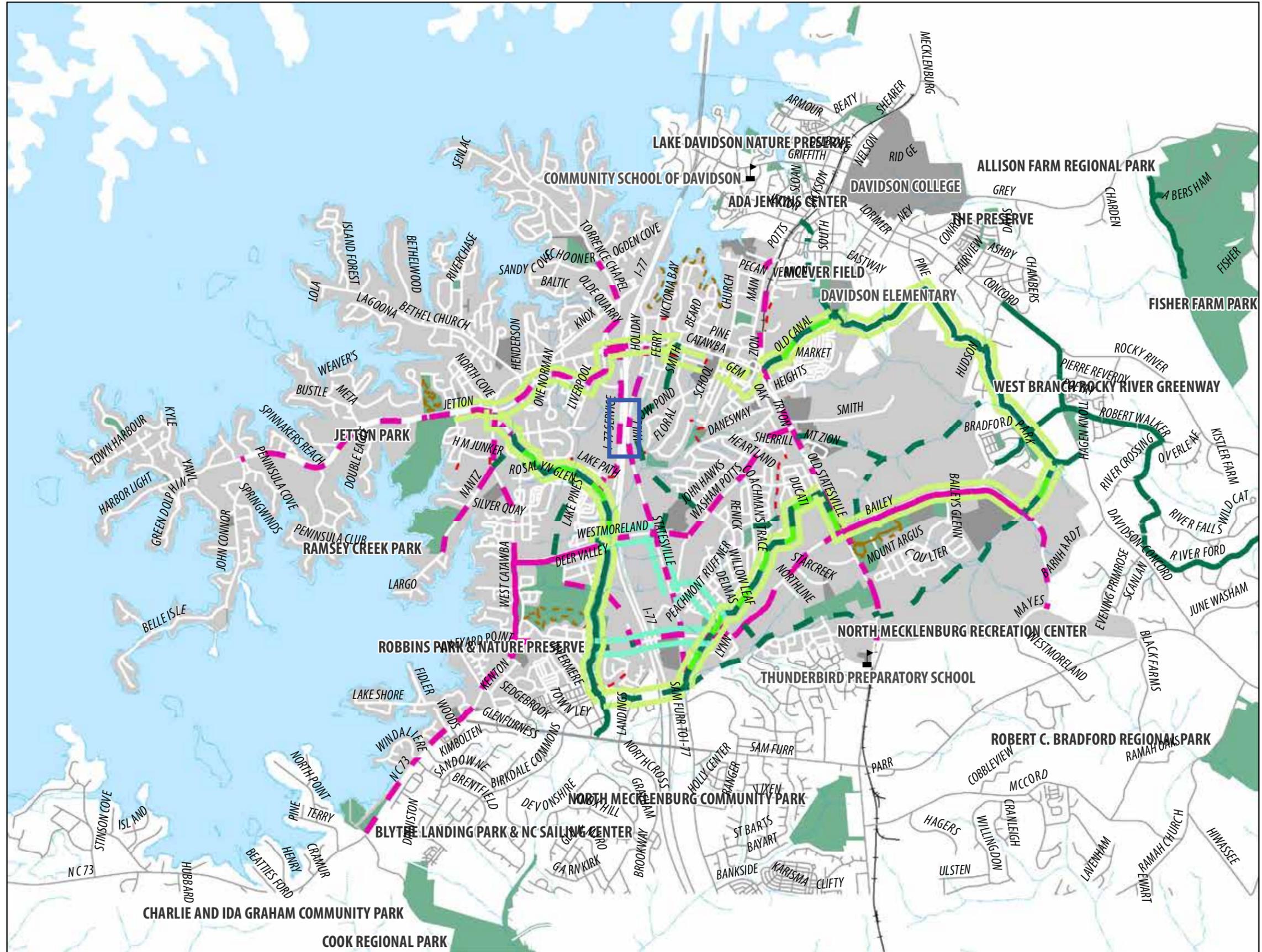


Figure 3.11. Multi-use paths Map (Greenways + Sidepaths)

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