

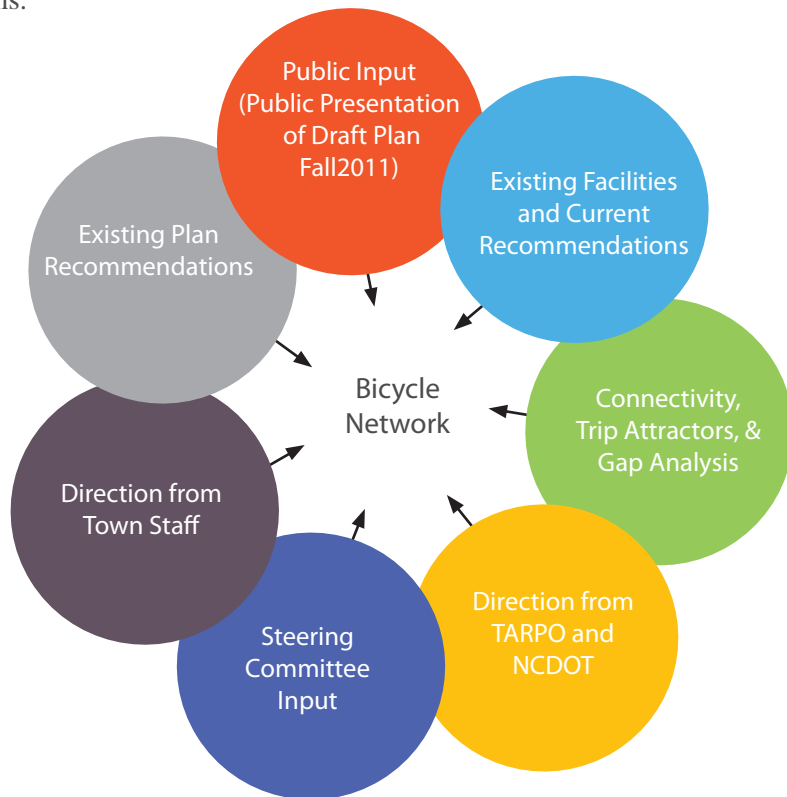


3. RECOMMENDATIONS

Overview & Methodology

The recommended bicycle network (page 3-5) represents a connected system that will allow transportation and recreation-based bicycle travel throughout Aberdeen. The recommended network is composed of numerous types of on-street and off-street bicycle facilities that serve to connect people and neighborhoods to local destinations. This chapter contains descriptions of the bicycle facility types and an overall map of key recommendations.

This diagram illustrates the many inputs and levels of analysis used to design the Bicycle Facility Network.



The recommended bicycle network builds on a key principle that bicyclists (both current bicyclists and potential future bicyclists) have a range of skill levels. Type “C” bicyclists are beginners, often seniors and children. Type “B” bicyclists are intermediate level, typically occasional commuters and recreational bicyclists. Type “A” bicyclists are experienced, regular commuters and recreational bicyclists who are comfortable sharing the road with motor vehicles. These groups are not always exclusive – some elite level athletes still like to ride on shared-use paths with their families, and recreational bicyclists will sometimes use their bicycles for utilitarian travel. Most importantly, the majority of the population falls in the “Type B” or “Type C” category. This Plan seeks to accommodate all current and future users of the system.



Type “A” bicyclists are experienced, regular commuters and recreational cyclists who are comfortable sharing the road with motor vehicles.



Type “B” bicyclists are intermediate level, typically occasional commuters and recreational cyclists.



Type “C” bicyclists are beginners, often seniors and children.

Recommended Bicycle Facility Network

According to North Carolina State Law, bicyclists have the same rights and responsibilities as motorists and are allowed to ride on all roads in Aberdeen. Modifications to roadways in Aberdeen as well as the addition of off-street pathways, will make bicycling a safer and more viable form of transportation. The key facility types for this plan are shared-lane markings (sharrows), bicycle lanes, paved shoulders, multi-use greenways, multi-use sidepaths and bicycle parking. These facilities should be included in all new roadway design and roadway reconstruction/widening projects in the Town of Aberdeen, especially as they are recommended in the Map 3.1 of this Plan. Bike route signage may be considered for any of the six bicycle facilities. Below are brief descriptions of six types of bicycle facilities recommended in Aberdeen (for more about bicycle facility design, see Appendix A).



Color corresponds to Map 3.1

BICYCLE SHARED-LANE MARKINGS (SHARROWS)

Shared lane markings, or “sharrows,” are placed in a linear pattern along a corridor, typically every 100-250 feet and after intersections. They function in several important ways:

- They 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.

(see A-3 for more on Sharrows)



Color corresponds to Map 3.1

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. The minimum width for a bicycle lane is four feet; five- and six-foot bicycle lanes are typical for collector and arterial roads. There are some opportunities for bicycle lanes in Aberdeen in the long term when roadways are widened and curb and gutter are added. As a general practice, any local roadway that is widened should incorporate bicycle lanes, with consideration for speed limit reductions.



Color corresponds to Map 3.1

PAVED SHOULDERS Paved shoulders are the part of a roadway which is contiguous and on the same level as the regularly traveled portion of the roadway. There is no minimum width for paved shoulders; however a width of at least four feet is preferred. Ideally, paved shoulders should be included in the construction of new roadways and/or the upgrade of existing roadways, especially where there is a need to more safely accommodate bicycles. Recreational bicycling is very common across this region of the Triangle. Most rural roadways in their existing configuration, either feature no shoulder or only a 1-2 foot paved shoulder which is not adequate for bicyclists. Roadways in which paved shoulders should be added or widened to a minimum of four feet are shown on Map 3.1. In cases where curb and gutter is added to roadways where paved shoulders are recommended, bicycle lanes should replace paved shoulders. Current two-lane roads that would still benefit from short-term paved shoulder widening include: Saunders Blvd, Roseland Rd, Pinehurst St, Bethesda Rd and Johnson St (see A-7 for more on Paved Shoulders)



Color corresponds to Map 3.1

MULTI-USE TRAILS (A.K.A. GREENWAYS)

A greenway is defined as a linear corridor of land that can be either natural, such as rivers and streams, or man-made, such as utility corridors or abandoned railroad beds. Many greenways contain trails that can be designed to accommodate a variety of trail users, including bicyclists, walkers, hikers, joggers, skaters, horseback riders, and those confined to wheelchairs (hence, the term ‘multi-use trail’). Greenway corridors can also serve environmental purposes, protecting forests and water quality, and offering ample opportunities for environmental education. Greenway trails in Aberdeen should be integrated with and serve as an off-road extension of the on-road bicycle network.

This is a planning level of analysis for trails. Trails can be constructed of many different materials, however, for trails that serve the purpose of bicycle transportation, hard surfaces such as asphalt or concrete are recommended. Each trail project will also require close coordination with nearby property owners. Design features such as landscaped screening, fencing, and other treatments should be considered to help ensure privacy where desired.



Color corresponds to Map 3.1

MULTI-USE SIDEPATHS

In order to best serve different types of bicyclists (see page 3-2) multi-use trails located adjacent to roadways (middle photo to the left) should not prohibit the provision of adequate on-road bicycle facilities (such as paved shoulders or bicycle lanes). Furthermore, multi-use trails next to roadways are most appropriate in corridors with few driveways and intersections and should be at least 10’ wide.

Multi-use trails are the most highly desired facility types identified during this planning process and the pedestrian planning process (2011). This is common across the State of North Carolina and the United States as a whole. Families and novice bicyclists are most comfortable in an off-road situation. Therefore, the multi-use trail network is a very integral part of the overall bicycle network, and it’s development should be a priority of the Town.



BICYCLE PARKING

This plan recommends adding bicycle racks to destinations throughout town, including Downtown Aberdeen, at parks, schools, the library, post office, grocery stores, shopping/employment centers, and multi-family housing communities.

Bicycle parking is recommended at the following locations in Aberdeen:

- Downtown Core (near Poplar & Main)
- Aberdeen Lake Park
- Food Lion
- Harris Teeter
- Rays Mill Pond
- Malcolm Blue Farm
- All Schools
- Wal-Mart
- Town Hall
- Commercial Areas
- Post Office



INVERTED “U”
One rack element supports two bikes.



POST AND LOOP
One rack element supports two bikes.

(see A-18 for more on Bicycle Parking)



Map 3.1 Overall Bicycle Facility Network

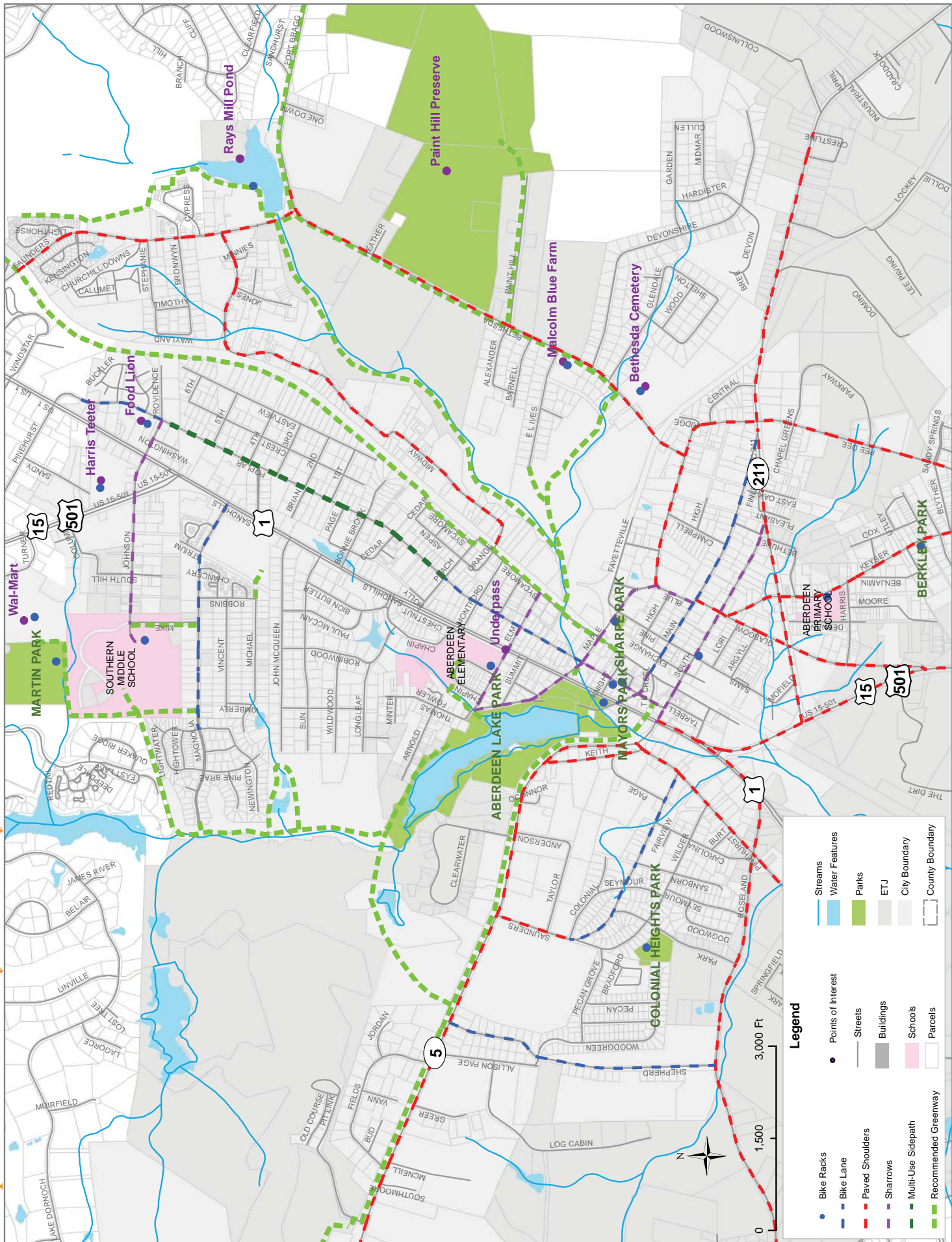


Table 3.1 Bicycle Facility Recommendations

Area/Location	Road Pavement	Lane Width	# of Lanes	Speed Limit	Parking	R-O-W Available	Bicycle Facility Recommendation #1	Method of Construction for Recommendation #1	Alternative Recommendation	Other Recommendations / Information
Poplar St near Johnson St	33.5 feet	11	3 (1 center turn lane)	35	No	Yes	Bike Lanes	New Construction	Sharrows	Reduce speed from 35mph to 30 mph
Poplar St (from Johnson to Providence)	28 feet	12	2	35	No	Yes	Multi-Use Side Path	New Construction	Bike Lanes	Reduce speed from 35mph to 30 mph / Bike lanes would be most affordable option, utilizing a restripe, and may be used in concert with a sidewalk
Poplar St (from Providence to 3rd)	29.5'	11.5	2	35	No	Yes	Multi-Use Side Path	New Construction	Bike Lanes	Reduce speed from 35mph to 30 mph / Bike lanes would be most affordable option, utilizing a restripe, and may be used in concert with a sidewalk
Poplar St (from 3rd to Cedar)	28.5'	11.5	2	35	No	Yes	Multi-Use Side Path	New Construction	Bike Lanes	Reduce speed from 35mph to 30 mph / Bike lanes would be most affordable option, utilizing a restripe, and may be used in concert with a sidewalk
Poplar St (from Cedar to Peach)	29'	9.5	2, 7' parking on NB poplar	30	Yes	Yes	Bike Lanes	Restripe	Sharrows	Reduce speed from 30mph to 25mph Add pedestrian and bicycle signage
Magnolia Dr. (from Atrium to Sandhills)	33	14	2	35	Yes	Yes	Bike Lanes	New Construction / Restripe	Paved Shoulders	
Magnolia Dr. (West of Atrium)	19	9	2	35	No	Yes	Bike Lanes	New Construction / Restripe	Paved Shoulders	bicycle facilities would provide safe access from Woodlawn Apartments and other residential areas to commercial areas.
Johnson St	22	10	2	25	No	No	Sharrows	Pavement Markings		narrow corridor connecting N. Poplar to Sandhills, near commercial areas
Saunders Blvd (NE)	22	10	2	35	No	Yes	Paved Shoulders	Restripe		bicycle facilities would provide safe access from residential areas to commercial areas and to downtown.
Midway Rd	18	no marked lanes	unpainted	35	No	Yes	Paved Shoulders	New Construction		
Bethesda Rd / Hwy 211	8	18	2	35	No	Yes	Paved Shoulders	New Construction / Restripe		
Elm St	18	no marked lanes	unpainted	25	Yes	No	Sharrows	Stripe / Pavement Markings		
Main St	44.5'	11.5	2	20/35	Yes	No	Bike Lanes	Restripe / Pavement Markings	Sharrows	remove OSP along one side of Main street and add bike lanes OR keep OSP and add sharrows thru DT core.
Maple St (from Blue thru downtown)	18	no marked lanes	2	25	No	No	Sharrows	Stripe / Pavement Markings		
South St (from Finley to Garrett)	29'	12	2	35	Yes	No	Sharrows	Pavement Markings		
South St (thru Downtown Core)	20	9.5'	2	20	No	No	Sharrows	Pavement Markings		
Glasgow St	18	8	2	35	No	Yes	Paved Shoulders	New Construction / Restripe		
Keyser St	18	8	2	25	No	Yes	Paved Shoulders	New Construction / Restripe / Pavement Markings	Sharrows	very narrow stretch of road with speed limit 25mph
Blue St (from Maple St to Main St)	18	8	2	25	No	Yes	Sharrows	Pavement Markings		
Blue St (from Main St to South St)	20	9	2	25	No	Yes	Paved Shoulders	New Construction		
NC 211	23-40	22	2 (sporadic center turn lane)	45	No	Yes	Paved Shoulders	New Construction		signed as bike route
Poe Dee Rd	20	8	2	45	No	Yes	Paved Shoulders	New Construction		
Pinehurst St	24	11.5	2	35	No	Yes	Paved Shoulders	New Construction		bike lanes recommended if growth occurs and curb & gutter are installed
Keith St	20	9	2	35	No	Yes	Paved Shoulders	New Construction		
US 15 / 501	25	12	2	45	No	Yes	Paved Shoulders	New Construction / Restripe		
Saunders Blvd (from Pinehurst to Colonial)	30	11	2	25	Yes	Yes	Bike Lanes	Restripe		existing wide paved shoulders, reduce lane width to 9.5' and restripe to create bike lanes
Saunders Blvd (from Colonial to NC5)	24	9	2	25	No	Yes	Paved Shoulders	New Construction / Restripe		bike lanes recommended if growth occurs and curb & gutter are installed
Rosedale Rd	25	10	2	35	No	Yes	Paved Shoulders	Restripe		continual sidewalks along northbound side, shoulder exists in some areas
Sandhills Blvd (south of Johnson)	82	12.5'	5 (1 center turn lane)	45	No	No	Paved Shoulders	Restripe		
Shepard Trail	19-27	no marked lanes	2	25-35	Yes	No	Bike Lanes	Stripe	Paved Shoulders	Existing wide road corridor, stripe 9.5' lanes with bike lanes
Downtown Core				20	Yes	No	Sharrows	Pavement Markings		Downtown Core streets: Sycamore, South, Pine, Main, Maple, Poplar, Elm, Knight, Keith

For information on Bike Lane Restripe, Stripe, New Construction, see page 3-8.

Map 3.2 Recommendations Map Key

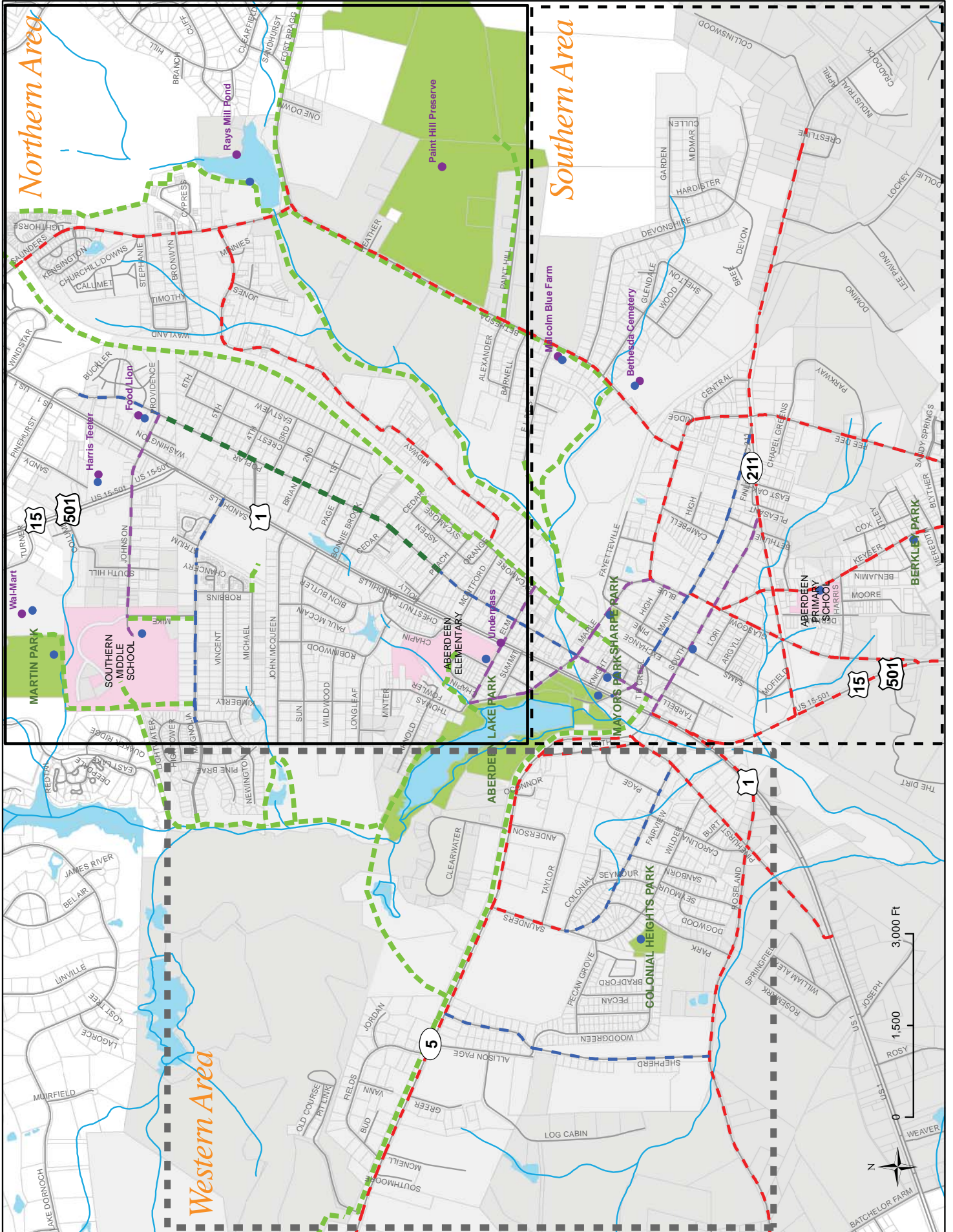


Table 3.2 Bicycle Facility Recommendations - Northern Area

Area / Location	Road Pavement	Lane Width	# of Lanes	Speed Limit	Parking	R-O-W Available	Bicycle Facility Recommendation #1	Method of Construction for Recommendation #1	Alternative Recommendation	Other Recommendations / Information
Downtown Core				20	Yes	No	Sharrows	Pavement Markings		Downtown Core streets: Sycamore, South, Pine, Main, Maple, Poplar, Elm, Knight, Keith
Poplar St near Johnson St	33.5 feet	11	3 (1 center turn lane)	35	No	Yes	Bike Lanes	New Construction	Sharrows	Reduce speed from 35mph to 30 mph
Poplar St (from Johnson to Providence)	28 feet	12	2	35	No	Yes	Multi-Use Side Path	New Construction	Bike Lanes	Reduce speed from 35mph to 30 mph / Bike lanes would be most affordable option, utilizing a restripe, and may be used in concert with a sidepath
Poplar St (from Providence to 3rd)	29.5'	11.5	2	35	No	Yes	Multi-Use Side Path	New Construction	Bike Lanes	Reduce speed from 35mph to 30 mph / Bike lanes would be most affordable option, utilizing a restripe, and may be used in concert with a sidepath
Poplar St (from 3rd to Cedar)	28.5'	11.5	2	35	No	Yes	Multi-Use Side Path	New Construction	Bike Lanes	Reduce speed from 35mph to 30 mph / Bike lanes would be most affordable option, utilizing a restripe, and may be used in concert with a sidepath
Poplar St (from Cedar to Peach)	29'	9.5	2, 7 parking on NB Poplar	30	Yes	Yes	Bike Lanes	Restripe	Sharrows	Reduce speed from 30mph to 25mph Add pedestrian and bicycle signage
Magnolia Dr. (from Atrium to Sandhills)	33	14	2	35	Yes	Yes	Bike Lanes	New Construction / Restripe	Paved Shoulders	
Magnolia Dr. (West of Atrium)	19	9	2	35	No	Yes	Bike Lanes	New Construction / Restripe	Paved Shoulders	bicycle facilities would provide safe access from Woodlawn Apartments and other residential areas to commercial areas.
Johnson St	22	10	2	25	No	No	Sharrows	Pavement Markings		narrow corridor connecting N. Poplar to Sandhills, near commercial areas
Saunders Blvd (NE)	22	10	2	35	No	Yes	Paved Shoulders	Restripe		bicycle facilities would provide safe access from residential areas to commercial areas and to downtown.
Midway Rd	18	no marked lanes	unpainted	35	No	Yes	Paved Shoulders	New Construction		
Bethesda Rd / Hwy 211	8	18	2	35	No	Yes	Paved Shoulders	New Construction / Restripe		
Elm St	18	no marked lanes	unpainted	25	Yes	No	Sharrows	Stripe / Pavement Markings		

N O R T H E R N A R E A

Bicycle Lane - Stripe: Refers to projects that require only the striping of a bicycle lane, with no other changes needed to the roadway or existing roadway striping.

Bicycle Lane - Restripe: Refers to projects that require restriping travel lanes (often to a more narrow width) allowing adequate space for bicycle lanes. Narrowing the widths of travel lanes has been demonstrated to have no affect on overall roadway capacity (for more on this topic, refer to the Implementation Chapter of this Plan).

Bicycle Lane & Paved Shoulder - New Construction: Refers to projects that require adding additional pavement width to the roadway to allow adequate space for bicycle lanes or to allow cyclists to safely travel on a wide, paved shoulder.



Map 3.3 Northern Area Map

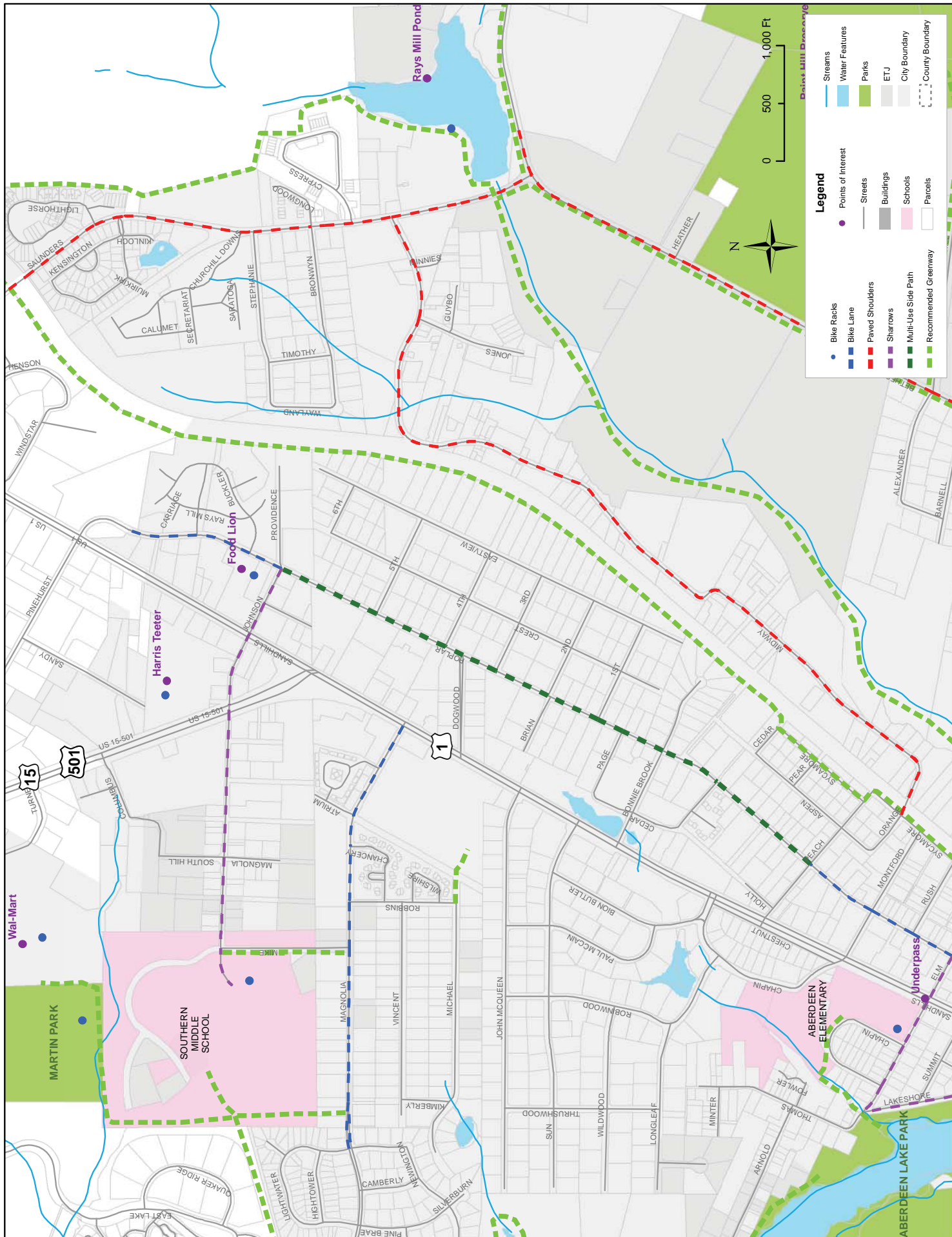


Table 3.3 Bicycle Facility Recommendations - Southern Area

Area / Location	Road Pavement	Lane Width	# of Lanes	Speed Limit	Parking	R-O-W Available	Bicycle Facility Recommendation #1	Method of Construction for Recommendation #1	Alternative Recommendation	Other Recommendations / Information
Bethesda Rd / Hwy 211	8	18	2	35	No	Yes	Paved Shoulders	New Construction / Restripe		
Elm St	18	no marked lanes	unpainted	25	Yes	No	Sharrows	Stripe / Pavement Markings		
Main St	44.5'	11.5	2	20/35	Yes	No	Bike Lanes	Restripe / Pavement Markings	Sharrows	remove OSP along one side of Main street and add bike lanes OR keep OSP and add sharrows thru DT core.
Maple St (from Blue thru downtown)	18	no marked lanes	2	25	No	No	Sharrows	Stripe / Pavement Markings		
South St (from Finley to Garrett)	29'	12	2	35	Yes	No	Sharrows	Pavement Markings		
South St (thru Downtown Core)	20	9.5'	2	20	No	No	Sharrows	Pavement Markings		
Glasgow St	18	8	2	35	No	Yes	Paved Shoulders	New Construction / Restripe		
Keyser St	18	8	2	25	No	Yes	Paved Shoulders	New Construction / Restripe / Pavement Markings	Sharrows	very narrow stretch of road with speed limit 25mph
Blue St (from Maple St to Main St)	18	8	2	25	No	Yes	Sharrows	Pavement Markings		
Blue St (from Main St to South St)	20	9	2	25	No	Yes	Paved Shoulders	New Construction		
NC 211	23-40	22	2 (sporadic center turn lane)	45	No	Yes	Paved Shoulders	New Construction		signed as bike route
Pee Dee Rd	20	8	2	45	No	Yes	Paved Shoulders	New Construction		
Pinehurst St	24	11.5	2	35	No	Yes	Paved Shoulders	New Construction		bike lanes recommended if growth occurs and curb & gutter are installed
Keith St	20	9	2	35	No	Yes	Paved Shoulders	New Construction		
US15 / 501	25	12	2	45	No	Yes	Paved Shoulders	New Construction / Restripe		
S O U T H E R N A R E A										

For information on Bike Lane Restripe, Stripe, New Construction, see page 3-8.



Map 3.4 Southern Area Map

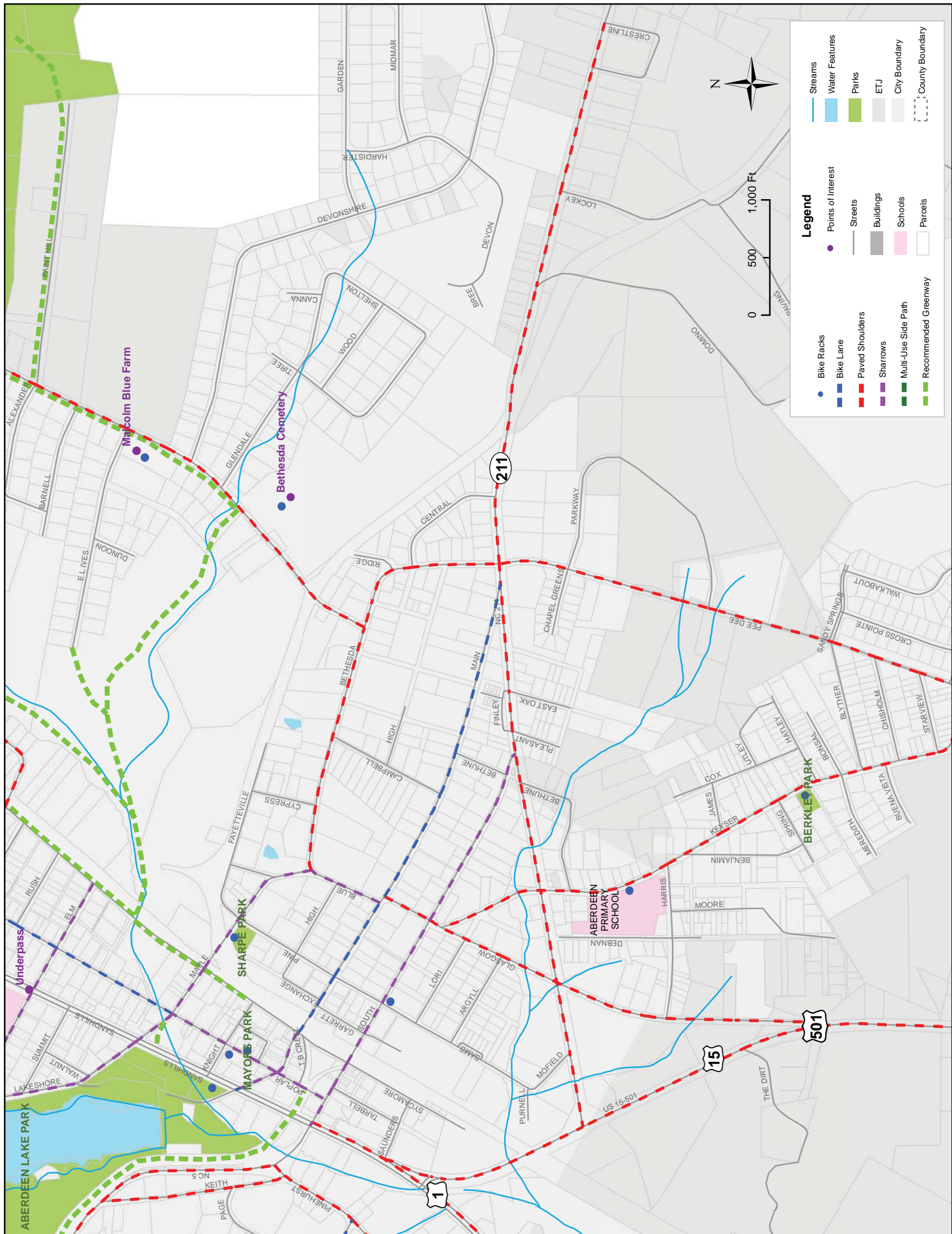


Table 3.4 Bicycle Facility Recommendations - Western Area

Area / Location	Road Pavement	Lane Width	# of Lanes	Speed Limit	Parking	R-O-W Available	Bicycle Facility Recommendation #1	Method of Construction for Recommendation #1	Alternative Recommendation	Other Recommendations / Information
Pinehurst St	24	11.5	2	35	No	Yes	Paved Shoulders	New Construction		bike lanes recommended if growth occurs and curb & gutter are installed
Keith St	20	9	2	35	No	Yes	Paved Shoulders	New Construction		
US 15 / 501	25	12	2	45	No	Yes	Paved Shoulders	New Construction / Restripe		
Saunders Blvd (from Pinehurst to Colonial)	30	11	2	25	Yes	Yes	Bike Lanes	Restripe		existing wide paved shoulders, reduce lane width to 9.5' and restripe to create bike lanes
Saunders Blvd (from Colonial to NC 5)	24	9	2	25	No	Yes	Paved Shoulders	New Construction / Restripe		
Roseland Rd	25	10	2	35	No	Yes	Paved Shoulders	Restripe		bike lanes recommended if growth occurs and curb & gutter are installed
Sandhills Blvd (south of Johnson)	82	12.5'	5 (1 center turn lane)	45	No	No	Paved Shoulders	Restripe		continual sidewalks along northbound side, shoulder exists in some areas
Shepard Trail	19 - 27	no marked lanes	2	25 - 35	Yes	No	Bike Lanes	Stripe	Paved Shoulders	Existing wide road corridor, stripe 9.5' lanes with bike lanes
Downtown Core				20	Yes	No	Sharrows	Pavement Markings		Downtown Core streets: Sycamore, South, Pine, Main, Maple, Poplar, Elm, Knight, Keith
W E S T E R N A R E A										

For information on Bike Lane Restripe, Stripe, New Construction, see page 3-8.

