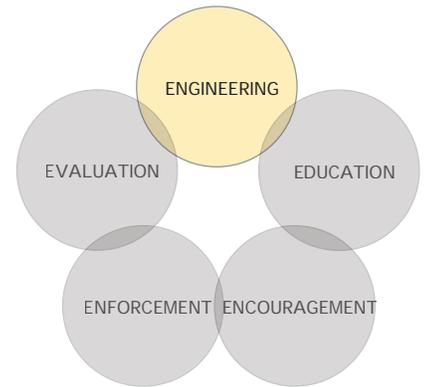


*Chapter Outline:*

- 3.0 Overview
- 3.1 Bicycle Network Methodology
- 3.2 User Types
- 3.3 Facility Types
- 3.4 Priority Bicycle Corridors
- 3.5 Other Important Corridors
- 3.6 Off-Road Bicycle Facilities (Greenways)
- 3.7 Ancillary Facilities
- 3.8 Regional Connectivity



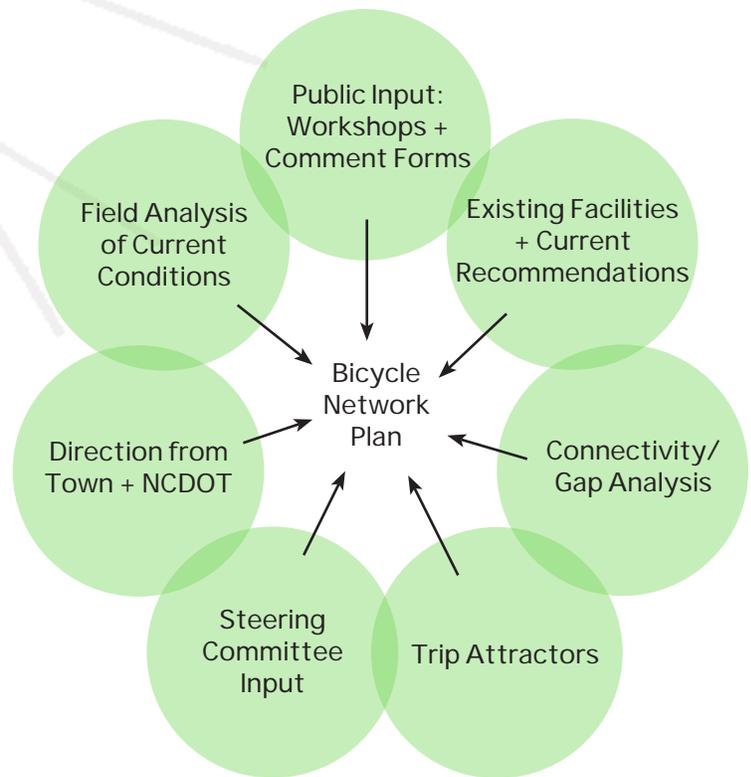
## CHAPTER 3: BICYCLE NETWORK PLAN

### 3.0 Overview

The Town of Carrboro’s Bicycle Network Plan was created through a process involving past planning efforts, public input, field analysis, and technical review by a steering committee. This chapter details the recommended bicycle facilities that make up the Network Plan, including bicycle corridors, greenway corridors, and recommended intersection improvements. These facilities, in conjunction with the other 4 E’s, seek to fulfill the goals of this Plan, creating a safe, accessible and comprehensive bicycle network. While Carrboro achieved a Bronze-level designation because of its existing facilities, there are still key gaps that were discussed in Chapter 2.

### 3.1 Bicycle Network Methodology

Input from the public was critical in developing the Network Plan. Previous planning efforts (such as the 2030 Long Range Transportation Plan) involved their own levels of public input which provided useful information, and have in turn influenced the Network Plan. Public input was also gathered specifically for this Comprehensive Bicycle Transportation Plan, and included: five public input maps gathered from two public meetings; guidance from the steering committee; and nearly 400 public comment forms that each provided specific route preferences and recommendations for improvement. For a complete review of the public input process, please see Appendix B. This appendix includes results from the Public Opinion Surveys and Public Workshops.



*Fig. 3-1. This diagram illustrates the many inputs and levels of analyses used to design the Bicycle Network.*





Figs. 3-2. From left: Type "A", "B", and "C" cyclists.

### 3.2 User Types

Accommodating bicycles begins with the understanding that bicyclists vary greatly in age, skill, and needs. There is no one design or bicycle facility that will suit all types of users; however, the network can be planned such that the benefits of each corridor will be maximized according to user-type, extent of use, and level of accessibility. Bicyclists' skill levels are rated in three distinct categories<sup>1</sup>:

- *"A" or Expert Cyclists* - These cyclists use their bicycles for transportation purposes. They are confident in their ability to both control their vehicle and ride in a variety of conditions, including alongside motor vehicles. They are comfortable using high-speed roads that don't provide a special accommodation for bicycles.
- *"B" or Casual Cyclists* - These cyclists use their bicycles for recreation and transportation purposes. They will ride within the roadway environment, but generally avoid high speed, heavily-trafficked roads. They prefer quiet, less-traveled residential streets and shared-use paths that are separate from the road environment.
- *"C" or Inexperienced Cyclists* - Many of these cyclists are children and therefore, are either novice or inexperienced riders who have neither an understanding of traffic laws and regulations, nor a good

grasp of how to control their bicycle. They often depend on their bicycle as a form of transportation - to friends' homes, school, and recreation venues. They are most comfortable on shared-use, off-road paths. Within the roadway environment, they often use sidewalks for their travel.

Specific bicycle facilities are recommended with the purpose of encouraging all users, including the most inexperienced bicyclist type (Type "C"), to use the facility. Different roadway environments will necessitate certain facilities, just as certain facilities will accommodate particular user-types. In general, casual or inexperienced bicyclists will likely favor facilities that provide extra operating space or are separate from the roadway, such as bicycle lanes, sidepaths, or greenway trails (see Section 3.3-Facility Types for more information). In situations where roadway space is constrained, facilities that serve the most experienced level of cyclists should be considered as a minimum solution.

<sup>1</sup> From Planning and Urban Design Standards by the APA. Hoboken, New Jersey: John Wiley and Sons, 2006.



Fig. 3-3. Weaver St. is a candidate for a sharrow/shared roadway facility.

### 3.3 Facility Types

#### Linear Network

The proposed Bicycle Network for Carrboro consists of signed/shared roadways, paved shoulders, bicycle lanes, sharrows, sidepaths, and greenway corridors. Together, these proposed facilities are intended to be incorporated into the existing bicycle network and roadways (or developed within existing rights-of-way) to create a safe and connected bicycle network for all cyclists throughout the Carrboro.

The proposed bicycle network shown on page 3-39 represents the ideal network. Getting from existing conditions to this ideal will take time and resources. Chapter 6: Implementation provides guidance on the phasing of facilities. However, network segments should be developed whenever there is an opportunity (such as through development dedications, roadway resurfacing projects, etc.), regardless of the order in the recommended phases.

Five main types of bicycle facilities have been identified for Carrboro and are outlined on the following pages. Please refer to the design guidelines in Chapter 7 for detailed information regarding proper placement and facility treatments. Also included in Chapter 7 are guidelines for other important bicycle facilities, such as bicycle racks, signage, recommendations for bicycle-friendly intersections, etc.



Fig. 3-4. Sharrow facilities are already being locally implemented within the county, as seen here on Martin Luther King Jr. Blvd. in Chapel Hill.

The complete recommended network of bicycle facilities and off-road greenways can be found on Map 3.2. Each segment can be found in the prioritization matrix found in Appendix A.

#### Sharrow Marking

An innovative solution for incorporating and implementing bicycle facilities in Carrboro is to use a relatively new facility called the sharrow. A sharrow is placed on a roadway that is too narrow to incorporate a striped bicycle lane. Sharrows are designated by a bicycle and arrow symbol painted on the roadway, alerting motorists that cyclists frequent this route. Additionally, it illustrates to bicyclists the proper direction for bicycle travel on the roadway and encourages rules of the road to be followed. This Plan recommends 11.3 miles of sharrows in Carrboro. More details on placement and use of sharrows is explained in Chapter 7 - Design Guidelines.

Cities such as Denver, CO; San Francisco, CA; and Portland, OR; have been using sharrows for some time now. Los Angeles recently conducted a survey to identify and evaluate roads suitable for placing sharrows: <http://www.labikecoalition.org/surveys/lacbcsharrowssurvey.html>. Although the final update of the MUTCD is still being finalized, the FHWA has approved the sharrow as a legitimate bicycle facility. It is recommended that Carrboro initiate a pilot project by implementing sharrows on local city-owned roads to demonstrate to NCDOT the validity and usefulness of this facility.

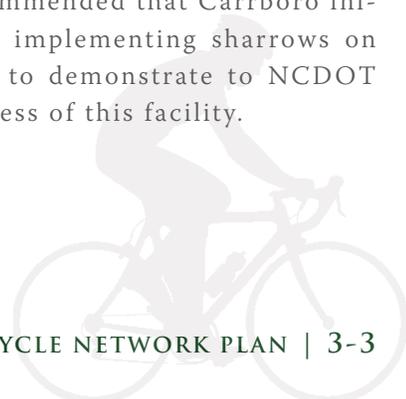




Fig. 3-5. The Libba Cotten Bike Path.

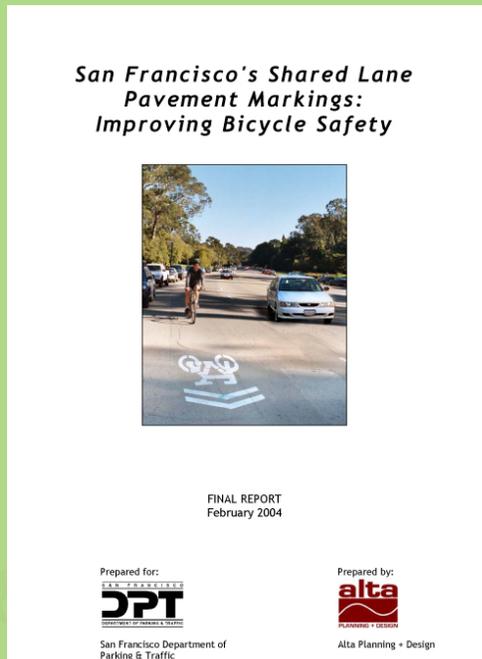


Fig. 3-6. Weaver St. is an excellent candidate for a sharrow facility as a short-term solution.

**Case Study: Sharrows - San Francisco, CA**

In 2004, the City of San Francisco Department of Parking and Traffic undertook a study of the effectiveness of shared lane pavement markings (or “sharrows”). It was called *San Francisco’s Shared Lane Pavement Markings: Improving Bicycle Safety*. The sharrow markings were of two-kinds, either with arrow or chevron markings indicating the proper direction a bicyclist should be going. The study sought to determine the markings’ effectiveness in 1) improving the position of both motorists and bicyclists on roadways without bicycle lanes, 2) reducing aggressive motorist behavior, and 3) encouraging correct bicyclist riding behavior. Through surveys and videotape analysis, the study concluded that the stencil markings significantly improved both motorists’ and cyclists’ positions in the roadway in relationship to each other and to parked cars, significantly reduced the number of sidewalk riders, and significantly reduced the number of wrong-way riders. As a result of the study, the California Traffic Control Device Committee formally approved the shared lane marking for use throughout the state (the marking will be official across the United States in the 2009 MUTCD). The study does not recommend that shared lane markings be used as a substitute for bicycle lanes where they are a feasible option. The study goes on to briefly discuss pavement markings in other communities including Chicago, Denver, and Portland.

For the full report, see [http://www.sfmta.com/cms/uploadedfiles/dpt/bike/Bike\\_Plan/Shared%20Lane%20Marking%20Full%20Report-052404.pdf](http://www.sfmta.com/cms/uploadedfiles/dpt/bike/Bike_Plan/Shared%20Lane%20Marking%20Full%20Report-052404.pdf)



**Paved Shoulders**

Paved shoulders are most often used by cyclists in more rural environments, although they are not confined to any particular type of environment. Paved shoulders are the part of a roadway which is contiguous to the regularly traveled portion of the roadway, and is on the same level as the roadway. Shoulders should be provided on both sides of the road. 6.3 miles of paved shoulders are recommended for this Plan. NCDOT requires a minimum width of four-feet to safely accommodate bicycles. See Chapter 7: Design Guidelines for details.

**Bicycle Lanes**

A bicycle lane is a portion of the roadway that has been designated by striping, signing, and pavement markings for the preferential or exclusive use of bicyclists. Bicycle lanes should always be located on both sides of the road (except one-way streets), and carry bicyclists in the same direction as adjacent motor vehicle traffic. This Plan recommends 12.2 additional miles of bicycle lanes. The minimum width for a bicycle lane is four feet; five- and six-foot bike lanes are typical for collector and arterial roads. See Chapter 7: Design Guidelines for details.

**Greenway Corridors**

Greenway corridors, for the purposes of this study, are off-road, multi-use facilities that provide an excellent source for alternative transportation and recreation. Greenway corridors can also serve an envi-

ronmental purpose, to protect forests and enhance water quality. Greenway corridors can be constructed of different surfacing materials depending upon the projected usage and surrounding landscape, but for the purposes of bicycle facilities, they should be constructed of concrete or asphalt. These corridors typically take advantage of linear stream corridors, easements, and other tracts of open space. Examples of different types of greenways can be seen in Chapter 7: Design Guidelines. Greenway trails in Carrboro should be integrated with and serve as an off-road extension of the on-road bicycle and pedestrian network. Numerous greenway opportunities were identified throughout Carrboro, via consultant fieldwork, public input, and other local and regional planning efforts, and as a result, more than 19 miles of greenway are recommended. When designated for bicycle use, a greenway trail should be at least 10-feet wide and be constructed of concrete or asphalt. Proposed greenway corridors are illustrated on Map 3.2.

### ***Sidepaths***

This type of path is similar to a multi-use path or greenway trail, but it is constructed within a roadway corridor right-of-way, physically separated from motorized vehicular traffic. Side paths should be a minimum of ten feet wide with preferred widths of 12-feet or greater. They are most appropriate in corridors with few driveways and intersections. Bicycle routes where side paths are recommended

should also have adequate on-road bicycle facilities (such as paved shoulders or bicycle lanes) wherever possible. This Plan recommends 4.7 miles of sidepaths. See Chapter 7: Design Guidelines for details.

### ***Ancillary Treatments***

In addition to the above facilities, a number of other important bicycle treatments can improve safety throughout the bicycle network. A full listing and description of these facilities and treatments can be found in Chapter 7: Design Guidelines. A summary of three major treatments is provided below.

***Bicycle Parking:*** This refers not only to bicycle racks, but also covered bicycle parking. The design guidelines describe which types of racks should be used, and which types to avoid.

***Driveway Access Management:*** This refers to reducing the size and frequency of driveways for motor vehicles crossing sidewalks and bicycle routes to adjacent parking lots and property. For the overall safety of bicyclists and pedestrians, closing and/or rerouting driveways to side streets could prove to be more effective than the development of any single facility type.

***Traffic Calming:*** This refers to a range of measures that reduce the impact of vehicular traffic on residents, pedestrians and cyclists - most commonly on residential streets, but also now on commercial streets.





Fig. 3-7. Greensboro and Main St. intersection.

### 3.4 Priority Bicycle Corridors

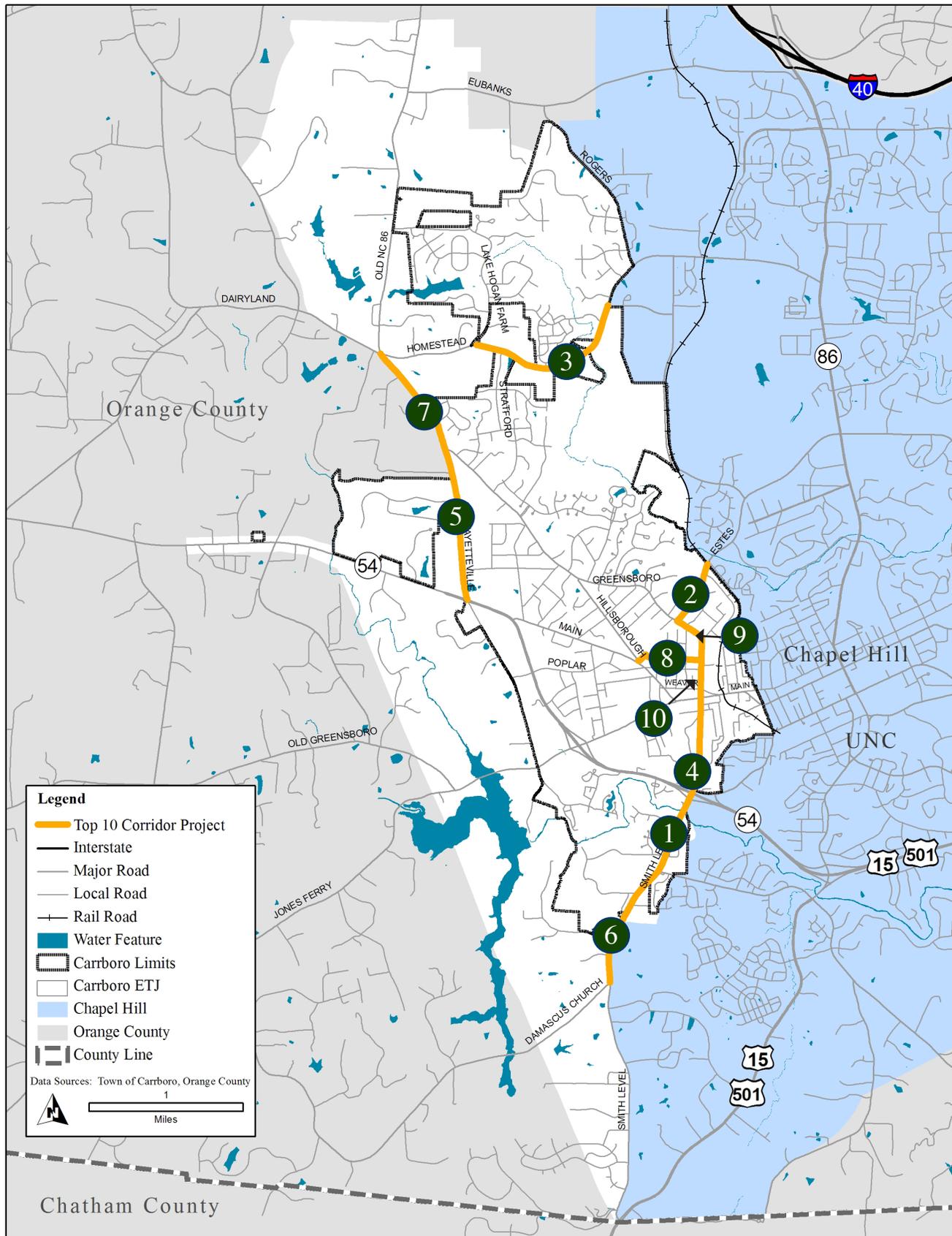
This section provides detailed bicycle recommendations for important roadway corridors and intersections within those corridors. The prioritization process and matrix, described in Appendix A: Prioritization and Cost Estimates, defines the Top 10 network corridor segment priorities for the Town of Carrboro. For each of the Top 10 roadway corridors, recommended solutions, interim treatments, and cut sheets are provided with details of the sections.

The locations of the following higher priority corridor segment recommendations are shown on Map 3.1. The map numbers reference the prioritized list of recommendations presented in this section. The Bike Facility Recommendations Table (see pages 3-28 – 3-29) illustrates Top 10 priority projects as well as overall recommendations, segment length, and construction type. Maps 3.2 and 3.3 at the conclusion of this chapter present the specific recommended facilities, including greenways, as an overall network.

The bicycle network is intended to provide a guide for the community that can respond to changing conditions and community priorities. It is important to note that these recommendations are based on current knowledge, conditions, and projects, and are intended to be updated on an ongoing basis. As the area continues to change and grow, with modification of transportation corridors and development, new priorities may arise.

Design guidelines in Chapter 7 contain specific standards for the following recommended bicycle facility types.

# MAP 3.1: BICYCLE CORRIDOR MAP



The bicycle corridor map shows locations of Top 10 priority projects, as indicated by public input and Bicycle Plan steering committee members.



Fig. 3-8. Smith Level Rd. would benefit greatly from bicycle lanes and increased signage.

**Priority Roadway Corridors for Bicycle Improvements**

**1. Smith Level Road:** from NC-54 to Rock Haven Rd.  
(U-2803 TIP project to widen to multiple lanes, install sidewalks and bicycles lanes)

*Importance*

- Key gap in bicycle network (Not adequate space for bicyclists, especially along relatively steep hill of Smith Level Rd.)
- Very high priority among public participants
- Connectivity of multi-family and single family residential to Carrboro High School and Downtown

**Recommended Solution**

Work with NCDOT on the STIP project, U2803, to construct bicycle lanes along both sides of Smith Level Rd. to address issue of uphill biking especially (will require expansion of roadway width).

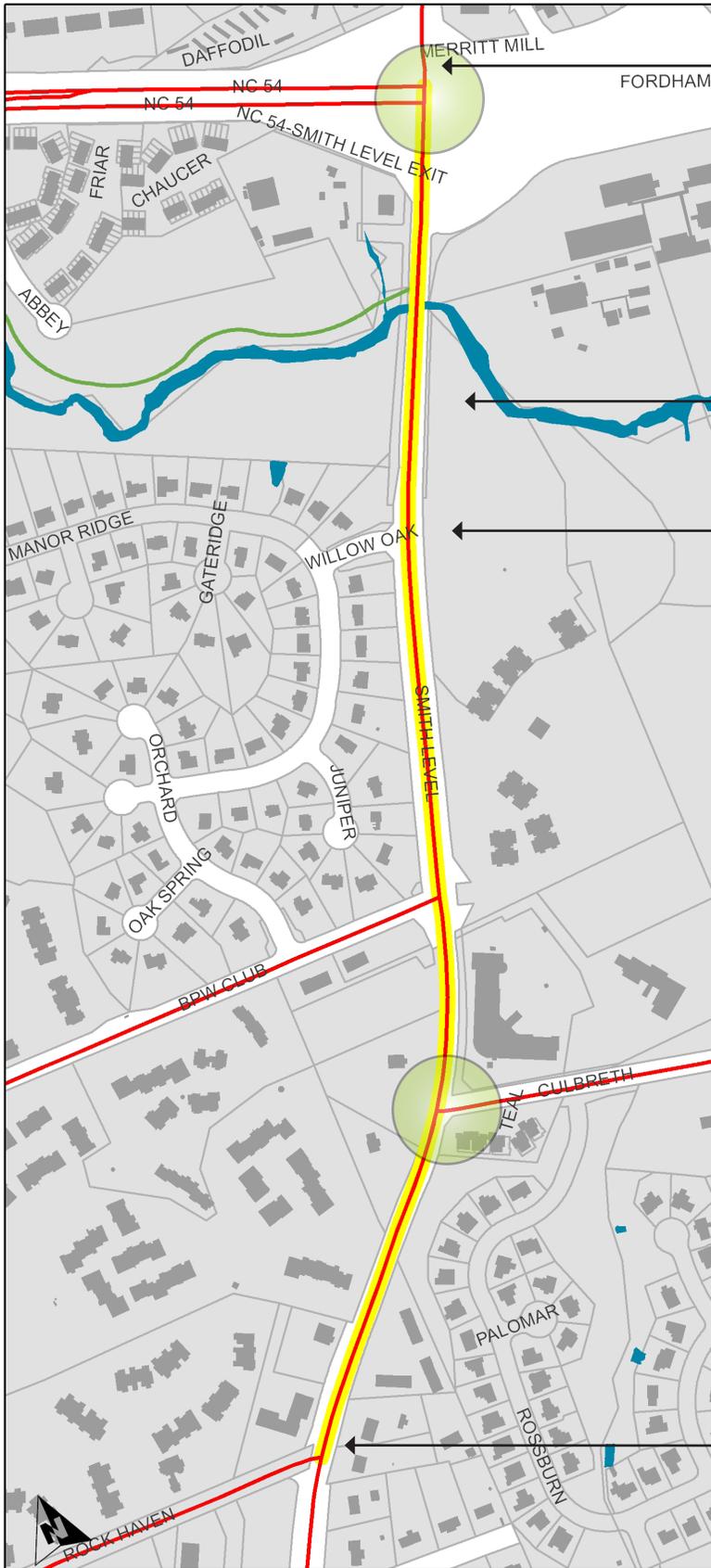
*Interim Treatments*

Increase enforcement, especially during peak bicycle travel times. Work with NCDOT to construct paved shoulder on both sides of Smith Level Rd. between Public Works Dr. and to uphill portion of Rock Haven Rd.

*\*Construction projects considered to be innovative; will require state and federal approval for permission to experiment with these types of treatments*

*Intersection Improvements:*

- Smith Level Rd. and Culbreth Rd.
  - Paint bicycle box\* to connect to future bicycle lanes
  - Install bicycle loop indicators
- Smith Level Rd. and NC-54
  - Provide colored bicycle lanes\* to clearly designate the bicyclist's space



**Project: 1**  
**Smith Level Road**

**Boundaries:**  
 NC 54  
 Rock Haven Road

**Facility:**  
 Bicycle Lanes  
 Colored Bicycle Lanes at intersections  
 Paved Shoulders as interim

**Project Type:**  
 Roadway Widening  
 Paint

**Function:**  
 Bicycle Commuter Route  
 School-Residential Connector

**Trip Generators:**  
 Carrboro High School  
 Frank Porter Graham Elementary  
 Future Morgan Creek Greenway

**Corridor Ownership:**  
 NCDOT

**Recommendation**  
 - Stripe Colored Bicycle Lanes\* across NC 54 access ramps and intersection

**Recommendation**  
 -Expand Road Width to enable bicycle lanes

**Interim Treatment**  
 - Expand roadway to construct paved shoulder on both sides from Rock Haven to Public Works Drive

-  **Intersection Improvement Project**  
(see facing page for description)
-  **Priority Project**
-  **Existing/Proposed Connecting Bicycle Facility**
-  **Existing/Proposed Connecting Greenway/Bikeway**





Fig. 3-9. Improvements to the intersection of Estes Rd. and N. Greensboro St. include improved bicycle lanes, a bike box, and ladder-style crosswalks.

**2. Estes Drive:** From N. Greensboro St. to town limits  
(U-2909, EB 5021 TIP project)

*Importance*

- Key gap in bicycle network
- High priority among participants

*Recommended Solution*

Extend wide shoulders along Estes Dr. to N. Greensboro St. and stripe as bicycle lanes

*Interim Treatment*

- Construct paved multi-use path along sewer corridor extending from Adam's Tract on northwest side of Estes Dr. to Wilson Park, ultimately to Greensboro St. at Williams St.

*Intersection Improvements:*

- Estes Dr. and North Greensboro St.
  - Reallocate lanes to properly install westbound bicycle lane to extend to intersection
  - Paint bicycle boxes\*
  - Install bicycle loop detectors
- Estes Dr. and proposed multi-use path
  - Further analysis is warranted; work with future Bolin Creek Greenway plan
  - Work with NCDOT to install a cross-alert mid-block bicycle and pedestrian crossing to Estes Park Apartment complex
- Williams St. and Greensboro St. (entrance to Wilson Park)
  - Work with NCDOT to provide crossing facilities

*\*Construction projects considered to be innovative; will require state and federal approval for permission to experiment with these types of treatments*



Fig. 3-10. Estes Dr. photo rendering showing recommended solution of bicycle lanes on both sides of the roadway.

**Project: 2**  
**Estes Drive**

**Boundaries:**

- N. Greensboro Street
- Carrboro Town Limits

**Facility:**

- Bicycle Lanes
- Greenway Trail

**Project Type:**

- Roadway widening for bicycle lanes
- Greenway Construction

**Function:**

- Bicycle Commuter Route
- Residential Connector

**Trip Generators:**

- Frances Shetley Greenway
- Adam's Tract Park
- Wilson Park
- Future Carolina North Campus

**Corridor Ownership:**

NCDOT

**Recommendation**

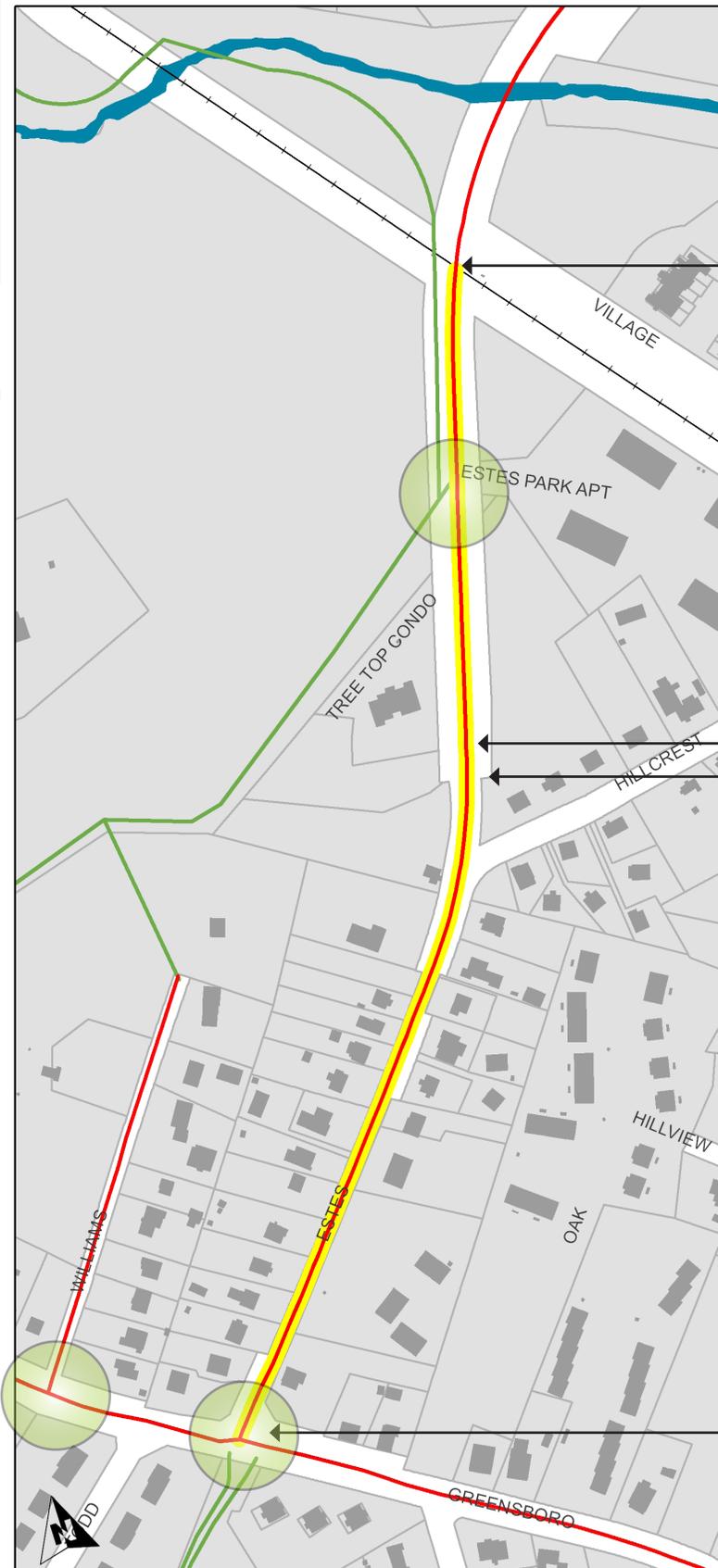
- Work with Chapel Hill to upgrade wide shoulders to striped bicycle lanes
- Create a "bicycle gateway" to Carrboro through signage

**Recommendation**

- Expand Road Width
- Stripe Bicycle Lanes

**Interim Treatment**

- Construct greenway from Estes Drive to Wilson Park along sewer line (see photo rendering below)



**Intersection Improvement Project**  
 (see facing page for description)



**Priority Project**



**Existing/Proposed Connecting Bicycle Facility**



**Existing/Proposed Connecting Greenway/Bikeway**

**3. Homestead Road:** from High School to Lake Hogan Farms

*Importance*

- Connects multiple residential areas
- Connectivity for recreational bicyclists to Orange County bicycling roadways
- High priority among public participants
- Fills gaps in between developing areas that are slotted for long-term construction

*Recommended Solution*

Construct bicycle lanes along entire stretch (will require expanding roadway width). Also develop a multi-use sidepath as a facility for bicyclists more comfortable in the off-road environment, such as Type B or C cyclists.

*Interim Treatment*

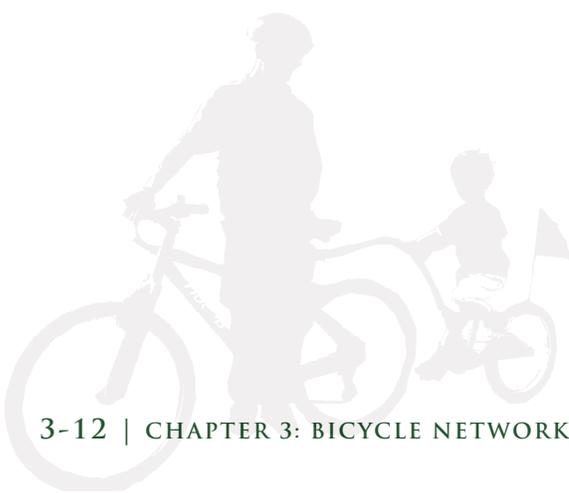
Install “Share the Road” signage, lower motor vehicle speed limit and increase enforcement.

*Intersection Improvements:*

- Old NC 86 and Homestead Rd.
  - Install bicycle loop detectors



*Fig. 3-11. Bicyclists on Homestead Road will benefit greatly with the installation of bicycle lanes for its entire stretch, and possibly a sidepath for Type B and C bicyclists.*



### Project: 3 Homestead Road

**Boundaries:**  
High School Road  
Lake Hogan Farms

**Facility:**  
Bicycle Lanes (Filling Gaps)

**Project Type:**  
Roadway widening

**Function:**  
Bicycle Commuter Route  
School-Residential Connector

**Trip Generators:**  
Chapel Hill High School  
Connection to Chapel Hill  
Future Bolin Creek Greenway

**Corridor Ownership:**  
NCDOT



**Recommendation**  
- Road Widening for Bike Lanes  
- Stripe Bicycle Lanes (fill gaps)

**Interim Treatment**  
- Increase Enforcement  
- Lower Speed Limit  
- Share the Road Signs

-  Intersection Improvement Project (see facing page for description)
-  Priority Project
-  Existing/Proposed Connecting Bicycle Facility
-  Existing/Proposed Connecting Greenway/Bikeway

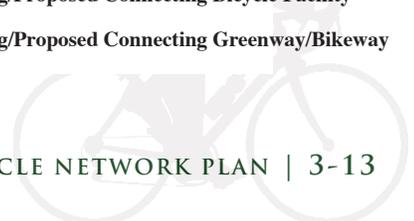




Fig. 3-12. Site lines make S. Greensboro St. unwelcoming and unsafe for bicyclists. Bike lanes, crossing signals, and increased signage will greatly improve the quality of this corridor.

**4. South Greensboro Street/Old Pittsboro Road:**  
from NC-54 to Weaver St.

*Importance*

- Key gap in bicycle network (not adequate paved shoulder space for bicyclists on steep uphill from NC 54 to Main St.)
- Very high priority among public participants

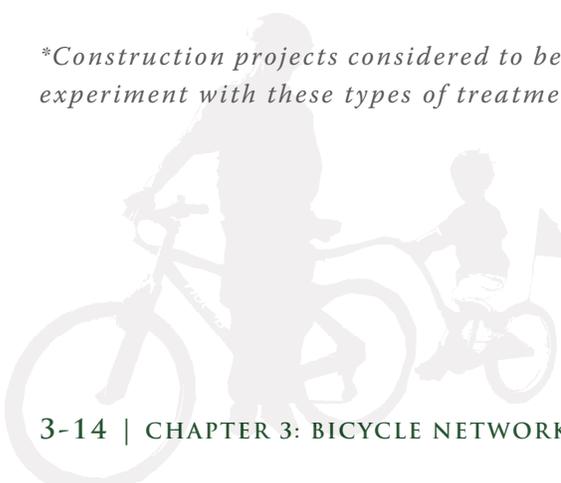
**Recommended Solution**

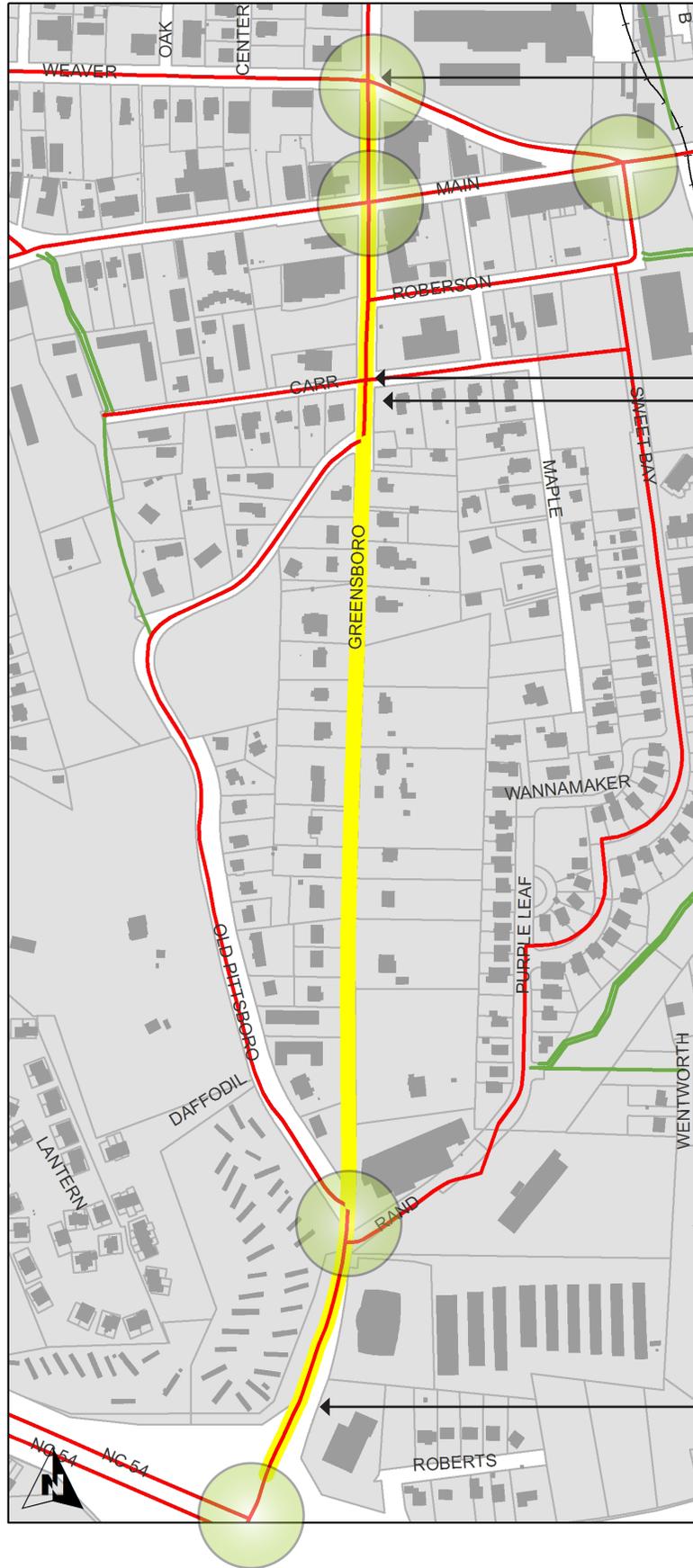
Provide sharrows from Weaver St. to Old Pittsboro Rd. Route bicyclists down Old Pittsboro Rd. and up Roberson Greenway with signage and sharrows. Bicycle lanes should be provided on S. Greensboro south from Old Pittsboro Rd. Current TIP project would place sidewalk on one side of S. Greensboro St.

*Intersection Improvements:*

- South Greensboro and NC 54
  - Restripe roadway and construct colored bicycle lanes\* across on and off ramps.
- Main St., Weaver St. and Roberson St.
  - Paint bicycle boxes\* on eastbound lane on Weaver St. at Main St.
  - Install bicycle signal loop detectors in bicycle box.
  - Paint colored bicycle lanes\* on the westbound Weaver St. lane across the intersection.
- S. Greensboro St. and Old Pittsboro Rd.
  - Add short segment of sidepath along Greensboro St. southward from Old Pittsboro Rd. to allow for perpendicular crossing to Roberson Greenway
  - Consider installing High intensity Activated crossWalk (HAWK) signal\* or other crossing signal due to high volume of bicycle and pedestrians crossing at non-signalized intersection.
  - Add highly-visible marked ladder crosswalks

*\*Construction projects considered to be innovative; will require state and federal approval for permission to experiment with these types of treatments*





**Project: 4**  
**S. Greensboro Street**  
**Boundaries:**  
 NC 54  
 Weaver Street  
**Facilities:**  
 Bicycle Lanes  
 Sharrow  
 Crossing Improvement  
 Bicycle Box  
**Project Type:**  
 Roadway widening/Paint  
**Function:**  
 Bicycle Commuter Route  
 Commercial-Residential Connector  
**Trip Generators:**  
 Roberson Street Greenway  
 Carrboro Century Center  
**Corridor Ownership:**  
 NCDOT

- Recommendation**
- Paint Sharrow Symbols
  - Possible Chance to Stripe 60' or so of Bicycle Lane approaching Main Street
  - Paint Bicycle Box at Main Street on northbound lane of S. Greensboro Street

- Recommendation**
- Improve Crossing at Old Pittsboro Street and Rand Road
  - Route Cyclists Up/Down Old Pittsboro Street or Roberson Greenway
  - Install signage

-  Intersection Improvement Project (see facing page for description)
-  Priority Project
-  Existing/Proposed Connecting Bicycle Facility
-  Existing/Proposed Connecting Greenway/Bikeway



**5. Old Fayetteville Road:** from McDougle Campus to NC-54  
(STIP Project U-3100B to provide bicycle, pedestrian and transit accommodations)

*Importance*

- Connects multiple gaps along Old Fayetteville Rd. between existing sections of bicycle lanes
- Connectivity for residential areas and McDougle middle and elementary schools
- High priority among public participants

*Recommended Solution*

Complete bicycle lanes along Old Fayetteville, filling current gaps.

*\*Construction projects considered to be innovative; will require state and federal approval for permission to experiment with these types of treatments*

*Intersection Improvements:*

- Old Fayetteville and NC-54
  - Install bicycle signal loop indicators
  - Install bicycle crossing signage on NC-54
- Strowd Lane and McDougle Middle School
  - Install crosswalk
  - Install HAWK signal\*
  - Install median refuge island and curb cuts at both ends of sidewalk



*Fig. 3-13. Old Fayetteville Rd. serves as a valuable connector for residents and McDougle schools. Bicycle lanes would fill current gaps in the bicycle network.*

**Project: 5**  
**Old Fayetteville Road**

**Boundaries:**

NC 54  
 McDougle Campus

**Facility:**

Bicycle Lanes (fill gaps)

**Project Type:**

Roadway widening

**Function:**

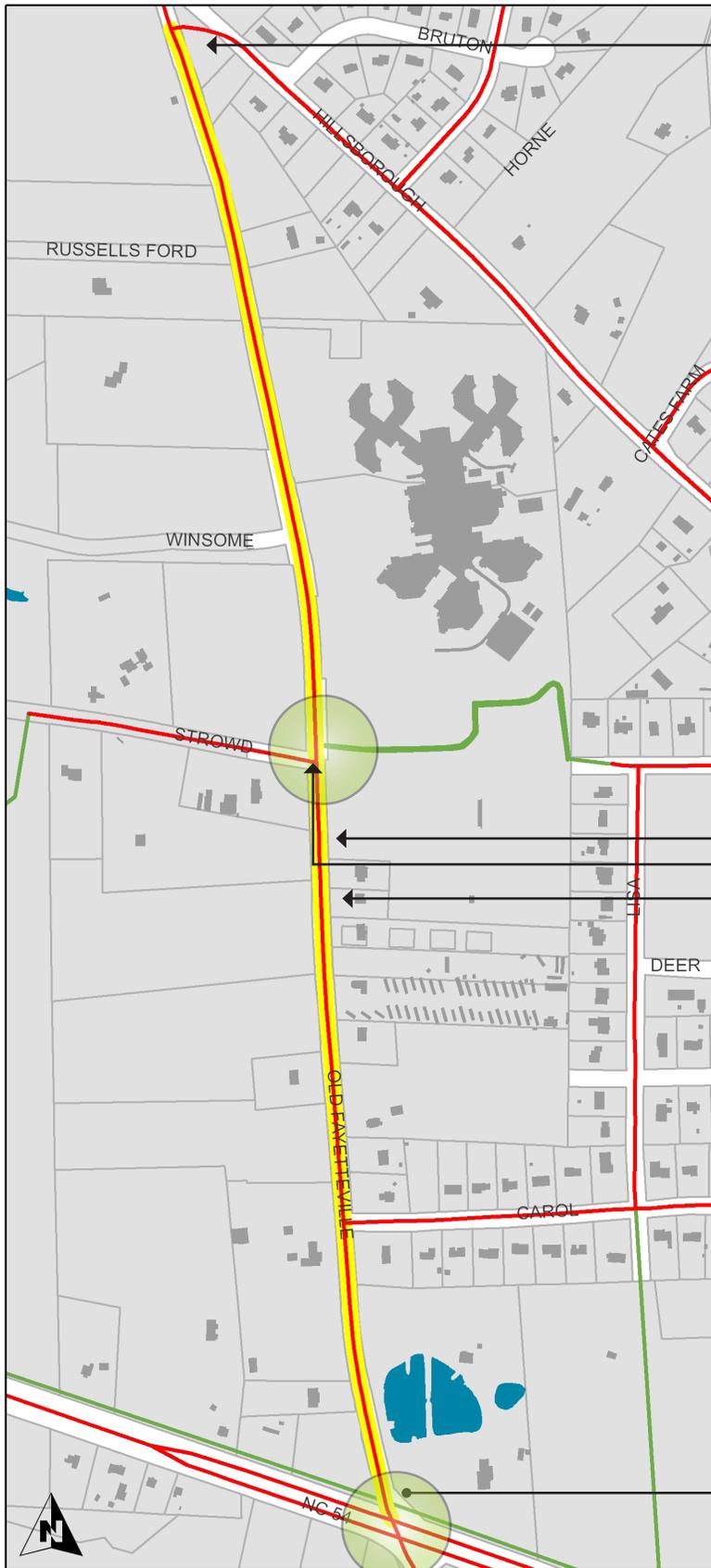
Bicycle Commuter Route  
 School-Residential Connector  
 Recreational Cyclist Route

**Trip Generators:**

McDougle Elem./Middle Schools  
 Anderson Park  
 Carrboro Plaza

**Corridor Ownership:**

NCDOT



**Recommendation**

- Maintain Existing Bicycle Lanes

**Recommendation**

- Improve Crossing  
 (see photo rendering below)



**Recommendation**

- Expand Road Width  
 - Stripe Bicycle Lanes

**Interim Treatment**

- Increase Enforcement during school beginning and ending hours



**Intersection Improvement Project**  
 (see facing page for description)



**Priority Project**



**Existing/Proposed Connecting Bicycle Facility**



**Existing/Proposed Connecting Greenway/Bikeway**

**6. Smith Level Road:** from Rock Haven Rd. to Damascus Church Rd.

*Importance*

- Connects rural residential areas to Carrboro High School
- Connectivity for recreational bicyclists existing town to rural Orange County
- Fills in gaps between Town and rapidly growing parts of northern Chatham County

*Recommended Solution*

Construct paved shoulders along the entire stretch (will require expanding roadway width).

*Interim Treatment*

Install Share the Road Signage, lower motor vehicle speed limit and increase enforcement.



Fig. 3-14. Views of Smith Level Rd. heading in- and out of town.

**Project: 6**  
**Smith Level Road**

**Boundaries:**

- Rock Haven Road
- Damascus Church Road

**Facility:**

- Wide Shoulders

**Project Type:**

- Roadway widening

**Function:**

- Bicycle Commuter Route
- School-Residential Connector

**Trip Generators:**

- Carrboro High School
- Regional Connector to Points South

**Corridor Ownership:**

- NCDOT

**Recommendation**

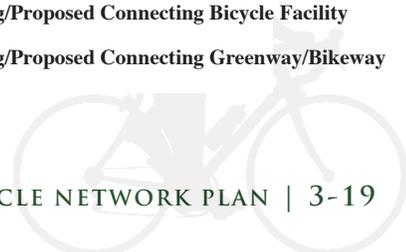
- Expand Road Width
- Pave Shoulders

**Interim Treatment**

- Increase enforcement during peak bicycle usage times
- Install signage



-  Priority Project
-  Existing/Proposed Connecting Bicycle Facility
-  Existing/Proposed Connecting Greenway/Bikeway



**7. Old NC 86:** from Hillsborough Rd. to Homestead Rd.

*Importance*

- Key gap in bicycle network (Not adequate paved shoulder space for recreational and commuter bicyclists to popular Orange County recreational bicycle riding)
- Very high priority among public participants

*Recommended Solution*

Extend bicycle facility northward to Homestead Rd./Dairyland Rd. as a bicycle lane. If funding and available lands allow, create a multi-use sidepath providing a facility for bicyclists less comfortable in the roadway environment, such as Type B and C cyclists.

*Interim Treatment*

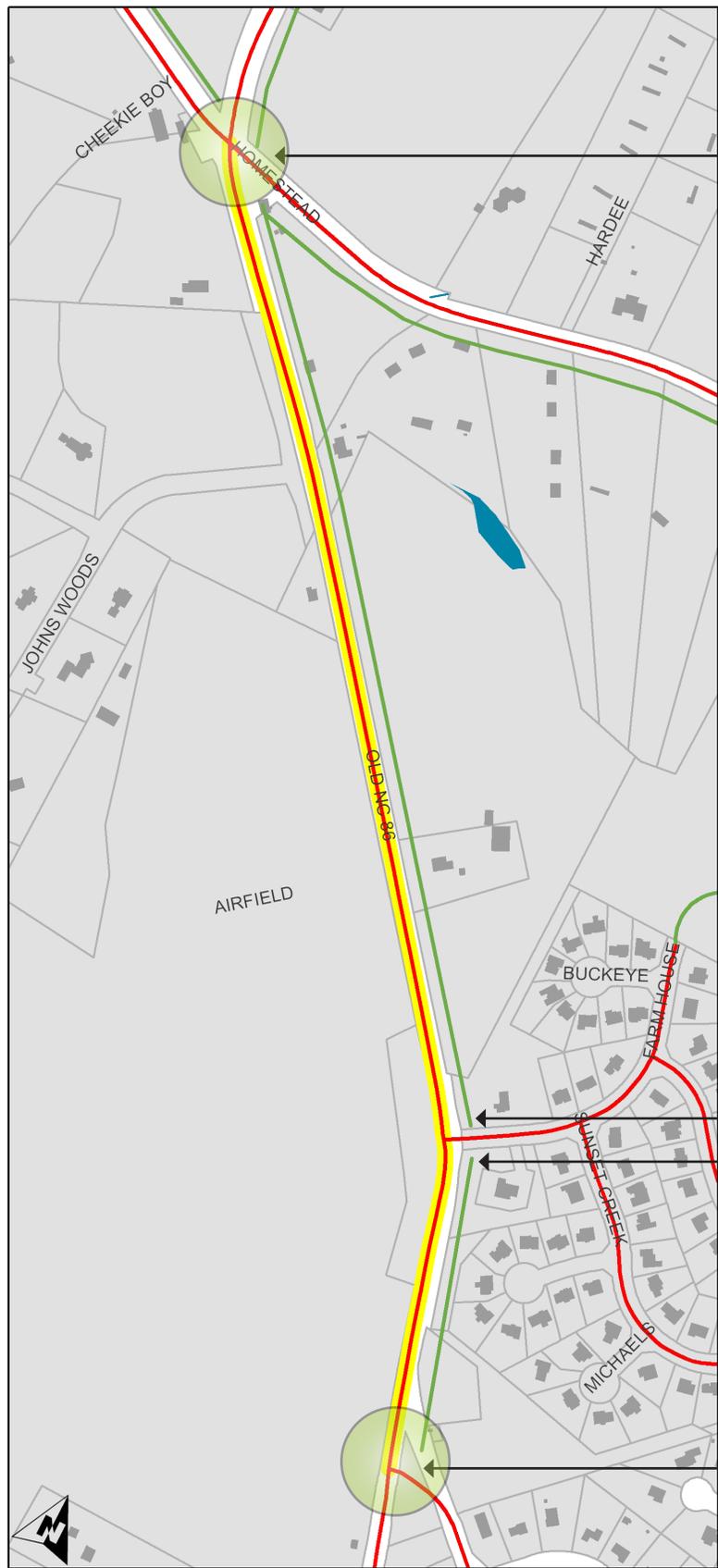
Lower posted motor vehicle speed limit on corridor and increase enforcement, especially during weekend mornings and afternoon weekdays (peak bicycle travel times).

*Intersection Improvements:*

- Old NC 86 and Homestead Rd.
  - Install bicycle loop detectors
  - Install bicycle crossing signage
- Hillsborough Rd. and Old NC 86
  - Install bicycle loop detectors
  - Install bicycle crossing signage



Fig. 3-15. Old 86 with a sidepath and bicycle lanes to Hillsborough Rd. The multiple options for facilities will appeal to various types of users.



**Project: 7**  
**Old NC 86**  
**Boundaries:**  
 Homestead Road  
 Hillsborough Road  
**Facility:**  
 Bicycle Lanes  
 Sidepath  
**Project Type:**  
 Roadway widening  
 Sidepath construction  
**Function:**  
 Bicycle Commuter Route  
 Regional Connector  
 Recreational Cyclist Route  
**Trip Generators:**  
 Existing Bicycle Lanes  
 Morris Grove Elementary  
**Corridor Ownership:**  
 NCDOT

- Recommendation**
- Expand Road Width
  - Construct Bicycle Lanes
  - Construct Sidepath (Alternative)

- Interim Treatment**
- Increase enforcement during peak bicycle usage times (weekends, mornings and evenings)

- Recommendation**
- Maintain Existing Bicycle Lanes
  - Construct Sidepath

-  **Intersection Improvement Project**  
(see facing page for description)
-  **Priority Project**
-  **Existing/Proposed Connecting Bicycle Facility**
-  **Existing/Proposed Connecting Greenway/Bikeway**



**8. Shelton Street:** from N. Greensboro St. to Hillsborough Rd.

*Importance*

- Neighborhood connector that links to Carrboro Elementary
- Neighborhood connector that links to Frances Lloyd Shetley Greenway

*Recommended Solution*

Install sharrows and signage to direct cyclists to local destinations and provide connections between existing bicycle lanes on Hillsborough and N. Greensboro.

*Intersection Improvements:*

- North Greensboro St. and Shelton St.
  - Move 30 mph speed limit sign north of Shelton St. intersection
  - Consider installing (HAWK)\* signal due to high volume of bicycle and pedestrians crossing at non-signalized intersection.

*\*Construction projects considered to be innovative; will require state and federal approval for permission to experiment with these types of treatments*



Fig. 3-16. Shelton St. is an important connector linking Carrboro Elementary to surrounding neighborhoods.

**Project: 8**  
**Shelton Street**

**Boundaries:**  
 N. Greensboro Street  
 Hillsborough Road

**Facility:**  
 Shared Road

**Project Type:**  
 Signage

**Function:**  
 Bicycle Commuter Route  
 School-Residential Connector

**Trip Generators:**  
 Carrboro Elementary School  
 Frances Shetley Greenway  
 Neighboring Commercial Areas

**Corridor Ownership:**  
 Town of Carrboro



**Recommendation**  
 - Bicycle Route Signage

**Recommendation**  
 - Bicycle Route Signage

**Recommendation**  
 - Bicycle Route Signage

 **Intersection Improvement Project**  
 (see facing page for description)

 **Priority Project**

 **Existing/Proposed Connecting Bicycle Facility**

 **Existing/Proposed Connecting Greenway/Bikeway**



**9. North Greensboro Street:** from Estes Dr. to Shelton St.

*Importance*

- Existing major bicycle network artery
- Connectivity to residential areas to and from Downtown
- Connectivity for recreational bicyclists exiting town for rural Orange County

**Recommended Solution**

Improve crossing at N. Greensboro and Estes by restriping traffic lanes to accommodate a proper bicycle lane, restriping crosswalks and installing a bicycle box (See Figure 3-17). Maintain existing bicycle lanes by restriping and sweeping regularly.

*Intersection Improvements:*

- Estes Dr. and North Greensboro St.
  - Reallocate lanes to properly install westbound bicycle lane to extend through intersection (see Figure 3-17)
  - Paint bicycle boxes\*
  - Install bicycle loop detectors
- North Greensboro St. and Shelton St.
  - Move 30 mph speed limit sign north of Shelton St. intersection
  - Consider installing (HAWK) signal\* due to high volume of bicycle and pedestrians crossing at non-signalized intersection.

*\*Construction projects considered to be innovative; will require state and federal approval for permission to experiment with these types of treatments*



*Fig. 3-17. Improvements at the intersection of Estes Dr. and N. Greensboro St. could include restriping ladder-style crosswalks, painting bicycle boxes, and installing eastbound bike lanes.*



**Project: 9**  
**N. Greensboro Street**

**Boundaries:**  
 Estes Drive  
 Shelton Street

**Facility:**  
 Improve Estes Intersection  
 Repaint Existing Bicycle Lanes  
 Sweep Bicycle lane Regularly

**Project Type:**  
 Restriping and Maintenance

**Function:**  
 Bicycle Commuter Route  
 Recreation Cyclist Connector

**Trip Generators:**  
 Wilson Park  
 Frances Shetley Greenway  
 Downtown

**Corridor Ownership:**  
 NCDOT

**Recommendation**  
 - Improve Intersection

**Recommendation**  
 - Maintain Existing Bicycle Lanes  
 - Repaint Lines  
 - Repaint Symbols  
 - Consider Flexible Bollards along bicycle lane on southbound lane on curve near Pleasant Lane

-  Intersection Improvement Project (see facing page for description)
-  Priority Project
-  Existing/Proposed Connecting Bicycle Facility
-  Existing/Proposed Connecting Greenway/Bikeway



**10. North Greensboro Street:** from Shelton St. to Weaver St.

*Importance*

- Key gap in bicycle network (Bicycle lanes extend north from Shelton St. on N. Greensboro St. but end coming into the downtown area in front of Harris Teeter)
- Very high priority among public participants

*Recommended Solution*

Extend bicycle facility southward to Main St. as a bicycle lane (expansion of roadway will be required as narrow roadway width is currently a constraint).

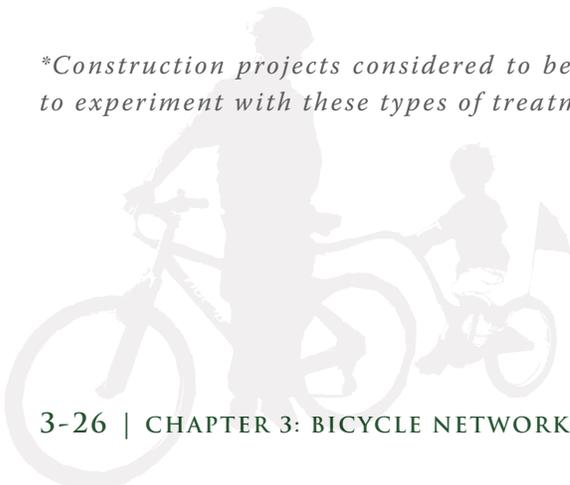
*Interim Treatment*

Extend bicycle facility southward to Main St. as a sharrows facility.

*Intersection Improvements:*

- North Greensboro St. and Shelton St.
  - Move 30 mph speed limit sign north of Shelton St. intersection
  - Consider installing (HAWK) signal\* due to high volume of bicycle and pedestrians crossing at non-signalized intersection.
- North Greensboro and Weaver St.
  - Paint bicycle box\* on westbound and eastbound sections of Weaver St. connecting to future bicycle lanes.
  - Widen eastbound road slightly to continue bicycle lane to connect to bicycle box\* on eastbound lane of Weaver St.
  - Install bicycle signal loop detectors in bicycle boxes\*

*\*Construction projects considered to be innovative; will require state and federal approval for permission to experiment with these types of treatments*





**Project: 10**  
**N. Greensboro Street**

**Boundaries:**  
 Shelton Street  
 Weaver Street

**Facility:**  
 Sharrow  
 Bicycle Lanes

**Project Type:**  
 Paint/Road widening

**Function:**  
 Bicycle Commuter Route  
 Commercial-Residential Connector

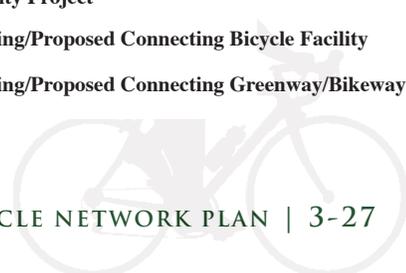
**Trip Generators:**  
 Downtown  
 Carrboro Century Center  
 Existing Bicycle Lanes to the north

**Corridor Ownership:**  
 NCDOT

**Recommendation**

- Paint Sharrow Marking
- Move 30mph speed limit sign north of Shelton Street.

-  Intersection Improvement Project (see facing page for description)
-  Priority Project
-  Existing/Proposed Connecting Bicycle Facility
-  Existing/Proposed Connecting Greenway/Bikeway



# BIKE FACILITY RECOMMENDATIONS TABLE

Rank	Bicycle Routes	From	To	Miles	Feet	Recommendation (Long Term)	Cost Estimate (Long Term)
1	Smith Level	NC 54	Rock Haven	0.76	4,008	Bicycle Lanes	\$456,000
2	Estes	Greensboro	Town Limits	0.42	2,233	Bicycle Lanes	\$186,000
3	Homestead	High School	Lake Hogan Farms	0.94	7,630	Bicycle Lanes	\$564,000
4	S. Greensboro	Weaver	NC 54	0.68	3,609	(See short-term solution)	\$408,000
5	Old Fayetteville	Hillsborough	NC 54	1.00	5,280	Bicycle Lanes	\$600,000
6	Smith Level	Rock Haven	Damascus Church	0.63	3,306	Bicycle Lanes	\$378,000
7	Old 86	Homestead	Hillsborough	0.72	3,793	Paved Shoulders	\$342,000
8	Shelton	N. Greensboro	Hillsborough	0.5	2,640	Sharrow	\$1,300
9	N. Greensboro	Estes	Shelton	0.33	1,733	Maintenance	\$2,080
10	N. Greensboro	Shelton	Weaver	0.19	994	Sharrow	\$520
11	Main St	Rosemary	Greensboro	0.28	1,450	Bicycle Lanes	N/A
12	Poplar	N. Greensboro	Main	0.36	1,925	Sharrow	N/A
13	N. Greensboro	Hillsborough	Estes	0.75	3,952	Existing Bicycle Lanes	N/A
14	Main St	Greensboro	Jones Ferry	0.16	840	Existing Bicycle Lanes	N/A
15	Weaver	E. Main	W. Main	0.36	1,885	Bicycle Lanes	N/A
16	Jones Ferry	Main	Davie	0.52	2,726	Existing Bicycle Lanes	N/A
17	Main St	Jones Ferry	Hillsborough	0.35	1,862	Bicycle Lanes	N/A
18	Jones Ferry	NC 54	Old Fayetteville	0.30	1,590	Bicycle Lanes	N/A
19	Old Fayetteville	NC 54	Jones Ferry	1.18	6,200	Bicycle Lanes	N/A
20	NC 54	Jones Ferry	Old Fayetteville	1.25	6,615	Existing Paved Shoulders	N/A
21	NC 54	Smith Level	Jones Ferry	0.82	4,323	Existing Paved Shoulders	N/A
22	Old 86	Eubanks	Homestead	1.72	9,100	Paved Shoulders	N/A
23	Elm	Weaver	Shelton	0.19	1,115	Sharrow	N/A
24	Jones Ferry	Davie	NC 54	.18	967	Sharrow	N/A
25	Stratford	Homestead	Autumn	0.52	2,750	Existing Bicycle Lanes	N/A
26	Main St	Hillsborough	NC 54	0.87	4,607	Existing Bicycle Lanes	N/A
27	Hillsborough	Old Fayetteville	N. Greensboro	1.25	6,623	Existing Bicycle Lanes	N/A
28	James	Hillsborough	Main	0.64	3,387	Sharrow	N/A
29	Jones Ferry	Old Fayetteville	Old Greensboro	0.57	3,000	Paved Shoulders	N/A
30	Hillsborough	N. Greensboro	Main	0.68	3,592	Existing Bicycle Lanes	N/A
31	Quail Roost	Hillsborough	Lisa	0.24	1,256	Sharrow	N/A
32	Davie	Main	Jones Ferry	0.60	3,155	Bicycle Lanes	N/A
33	Homestead	Rogers	High School	0.32	1,712	Bicycle Lanes	N/A
34	Seawell School	Homestead	Estes	1.91	10,070	Bicycle Lanes	N/A
35	Rogers	Eubanks	Homestead	1.22	6,432	Bicycle Lanes	N/A
36	NC 54	Old Fayetteville	Town Limits	1.90	10,057	Existing Paved Shoulders	N/A
37	Main St	Merritt Mill	Rosemary	0.15	773	Sharrow	N/A
38	Homestead	Lake Hogan Farm	Old 86	0.80	4,213	Bicycle Lanes	N/A
39	Lake Hogan Farm	Homestead	Hogan Hills	0.87	4,604	Existing Bicycle Lanes	N/A
40	Pine	Greensboro	Hillsborough	0.32	1,700	Sharrow	N/A
41	Hogan Hills	Old 86	Lake Hogan Farms	0.50	2,652	Existing Bicycle Lanes	N/A
42	Smith Level	Damascus Church	15-501	1.60	8,560	Paved Shoulders	N/A
43	Eubanks	Town Limits	Old 86	0.90	4,770	Bicycle Lanes	N/A
44	Old 86	Town Limits	Eubanks	0.50	2,600	Paved Shoulders	N/A

\* Phase 1 = Top 10 projects, all other simple paint projects; Phase 2 = all road diet and restripe projects; Maintenance = existing facilities that need to be swept/potholes that need repaving, etc; Opportunity Based = projects outside the Top 10 that require new construction and will occur if and when roadway is widened

Table 3-1. This list represents the majority of the recommended network of bicycle facilities in Carrboro. Shorter, residential segments are left out of this list. Note: Costs do not include inter-section improvements.

Construction Type (Long Term)	Short Term Solution	Cost Estimate (Short Term)	Phase*	Carrboro/NCDOT Road
New Construction	Paved Shoulder on South Side	\$456,000	Phase 1	NCDOT
New Construction	Wilson Park Greenway	\$175,000	Phase 1	NCDOT
New Construction	Enforcement/Share the Road Signage (2)	\$400	Phase 1	NCDOT
(See short-term solution)	Alternate Routing on Old Pittsboro/Signage (4)	\$1,000	Phase 1	NCDOT
New Construction	Enforcement/Share the Road Signage (2)	\$400	Phase 1	NCDOT
New Construction	Enforcement/Share the Road Signage (2)	\$400	Phase 1	NCDOT
New Construction	Enforcement/Share the Road Signage (2)	\$400	Phase 1	NCDOT
Paint	Sharrows (20)	\$1,300	Phase 1	Carrboro
Maintenance	Maintenance/Repaint Existing Lanes & Symbols	\$2,080	Phase 1	NCDOT
Paint	Sharrows (8)	\$520	Phase 1	NCDOT
New Construction	N/A	N/A	Opportunity Based	NCDOT
Paint	N/A	N/A	Phase 1	Carrboro
Maintenance	N/A	N/A	Maintenance	NCDOT
Maintenance	N/A	N/A	Maintenance	NCDOT
Road Diet/Restripe	N/A	N/A	Phase 2	Carrboro
Maintenance	N/A	N/A	Maintenance	NCDOT
Road Diet	N/A	N/A	Phase 2	NCDOT
Restripe	N/A	N/A	Phase 2	NCDOT
New Construction	N/A	N/A	Opportunity Based	NCDOT
Maintenance	N/A	N/A	Maintenance	NCDOT
Maintenance	N/A	N/A	Maintenance	NCDOT
New Construction	N/A	N/A	Opportunity Based	NCDOT
Paint	N/A	N/A	Phase 1	Carrboro
Paint	N/A	N/A	Phase 1	NCDOT
Maintenance	N/A	N/A	Maintenance	Carrboro
Maintenance	N/A	N/A	Maintenance	NCDOT
Maintenance	N/A	N/A	Maintenance	NCDOT
Paint	N/A	N/A	Phase 1	Carrboro
New Construction	N/A	N/A	Opportunity Based	NCDOT
Maintenance	N/A	N/A	Maintenance	NCDOT
Paint	N/A	N/A	Phase 1	Carrboro
New Construction	N/A	N/A	Phase 2	Carrboro
New Construction	N/A	N/A	Opportunity Based	NCDOT
New Construction	N/A	N/A	Opportunity Based	NCDOT
New Construction	N/A	N/A	Opportunity Based	NCDOT
Maintenance	N/A	N/A	Opportunity Based	NCDOT
Paint	N/A	N/A	Phase 1	NCDOT
New Construction	N/A	N/A	Opportunity Based	NCDOT
Maintenance	N/A	N/A	Maintenance	Carrboro
Paint	N/A	N/A	Phase 1	Carrboro
Maintenance	N/A	N/A	Maintenance	Carrboro
New Construction	N/A	N/A	Opportunity Based	NCDOT
New Construction	N/A	N/A	Opportunity Based	NCDOT
New Construction	N/A	N/A	Opportunity Based	NCDOT

\* Phase 1 = Top 10 projects, all other simple paint projects; Phase 2 = all road diet and restripe projects; Maintenance = existing facilities that need to be swept/potholes that need repaving, etc; Opportunity Based = projects outside the Top 10 that require new construction and will occur if and when roadway is widened

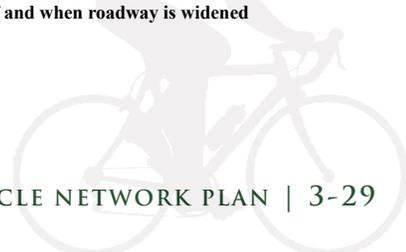




Fig. 3-18. If E. Main St. cannot be widened, a sharrow can serve as a comparable bicycle facility.

### 3.5 Other Important Corridors

Five other corridors (and intersections within these corridors) are described here because of their importance in overall connectivity to key destinations and because they fell just outside the Top 10 in the prioritization process.

**East Main Street:** from Chapel Hill town limits to Weaver St.

#### Importance

- Key roadway connection between Chapel Hill and Carrboro (No designated facility currently)
- High automobile and bicycle traffic volumes
- High priority among public participants

#### Recommended Solution

Extend bicycle facility from Cameron Blvd. (Chapel Hill) to Carrboro town limits as a bicycle lane, with major roadway reconfiguration and traffic calming.



Fig. 3-19. Main St. is busy with vehicles and bicyclists on a day-to-day basis. The introduction of a sharrow provides a short-term solution to areas with no facilities.

#### Interim Solution

Enforce speed limits. Place clear signage indicating the need to “Share the Road.” Install sharrow pavement markings on E. Main St.

#### Intersection Improvements:

- E. Main St. and Rosemary St.
  - Remove one westbound lane of Rosemary St. and stripe bicycle lanes on both sides of Rosemary St. to Chapel Hill limits.
- Main St. and Lloyd St.
  - Install bicycle loop detectors
  - Install “No Turn on Red” signs from Lloyd St.
  - Make marked crosswalks more highly visible (ladder painted)
  - Paint bicycle boxes\*

*\*Construction projects considered to be innovative; will require state and federal approval for permission to experiment with these types of treatments*



Fig. 3-20. Weaver St. is a key gap in the bicycle network and recommended bicycle facilities include bike lanes or sharrow markings.

**Weaver Street:** from W. Main St. to E. Main St.

*Importance*

- Key gap in bicycle network (Not a separated space for bicyclists currently)
- Very high priority among public participants
- In the middle of Downtown with high volume of bicyclists
- Dangerous condition of bicyclists passing by cars due to the tight width of the travel lane and parking stalls when approaching intersections

**Recommended Solution**

Bicycle lane along stretch to provide separated space for bicyclists. This will require removing on-street parking and/or roadway reconfiguration. Installation of a bicycle box\* at both ends.

*Interim Treatment*

Place sharrow markings along Weaver St. This would more clearly designate the appropriate location for bicyclists to share the roadway. Traffic often moves slowly through this corridor because of traffic lights, allowing bicyclists to easily keep up with the speed of traffic.

*\*Construction projects considered to be innovative; will require state and federal approval for permission to experiment with these types of treatments*

*Intersection Improvements:*

- Weaver St. and N. Greensboro St.
  - Paint bicycle box\* on westbound and eastbound sections of Weaver St. connecting to future bicycle lanes.
  - Widen eastbound road slightly to continue bicycle lane to connect to bicycle box\* on eastbound lane of Weaver St.
  - Install bicycle signal loop detectors in bicycle boxes
- Weaver St. and West Main St.
  - Install bicycle signal loop detectors
  - Paint bicycle box\* on northbound and eastbound lanes of W. Main St. once recommended road diet is completed (see page 3-33).
  - Consider colored bicycle box\* and bicycle loop indicator in front of service station on westbound lane of Weaver St.



**Old NC 86:** from Homestead Rd. to Hillsborough Rd.

*Importance*

- Increases connectivity for recreational bicyclists to Orange County bicycling roadways
- High priority among public participants
- Connect to the Morris Grove Elementary School on Eubanks along Old NC 86 north of Lake Hogan Farms

*Recommended Solution*

Develop paved shoulder bicycle facility along Old NC 86. Depending on cooperation from landowners and right-of-way issues, develop a multi-use side-path as a facility for bicyclists more comfortable in the off-road environment. This will also provide access to Morris Grove Elementary.

*Interim Treatment*

Lower motor vehicle speed limit and increase enforcement, especially during peak bicycle travel times. Install “Share the Road” signage.

*Intersection Improvements:*

- Old NC 86 and Homestead Rd.
  - Install bicycle loop detectors
  - Install bicycle crossing signage



Fig. 3-21. Old NC 86 is a road frequented by recreational bicyclists and conditions would vastly improve with short-term solutions such as “Share The Road” signage, and ultimately paved shoulders.



Fig. 3-22. W. Main St.'s proposed facilities include a road diet and bicycle lanes on both sides.

**West Main Street:** from Jones Ferry Rd. to Hillsborough Rd.

*Importance*

- Very high priority among public participants
- Important connection between Downtown area, Farmers Market, and residential areas
- Critical gap between existing bicycle facilities

**Recommended Solution**

Stripe bicycle lanes along this stretch of Main St. with the implementation of a road diet, converting existing four lanes to two travel lanes, a central turn lane, and striped bicycle lanes on both sides of the roadway.

*\*Construction projects considered to be innovative; will require state and federal approval for permission to experiment with these types of treatments*

*Intersection Improvements:*

- Main St. and Jones Ferry Rd.
  - Widen entrance to PTA bike path and paint directional arrows for turn lane (see photo rendering below)
  - Stripe and paint bicycle boxes\* on Jones Ferry Rd.
  - Stripe and paint bicycle boxes\* on Main St.
  - Paint colored bicycle lanes\* connecting PTA bike path to future bicycle lanes on W. Main St.



Fig. 3-23. The PTA bike path and Main St./Jones Ferry Rd. intersection is very much in need of improvement. Constructing a turn lane on the bike path would discourage bicyclists from using the sidewalk along Main St.

**Jones Ferry Road:** from Davie Rd. to Old Greensboro Hwy.

*Importance*

- Connections of multiple land uses
- Connectivity for areas south and west of the Town to the Downtown and existing bicycle lanes along Jones Ferry Rd. near Downtown
- High priority among public participants
- Connection under main highway

**Recommended Solution**

Develop bicycle lane from Davie Rd. to Old Fayetteville Rd. Consider colored bicycle lanes\* through NC-54 Bypass intersection creating a clear, designated space for bicyclists. From Old Fayetteville Rd. westward, develop paved shoulders until Old Greensboro Hwy. When and if University Lake’s bridge is replaced, adequate bicycle accommodations such as striped bicycle lanes on the bridge will need to be provided.

*Interim Treatment*

Increase enforcement, especially during peak bicycle travel times. Install “Share the Road” signage.

*Intersection Improvements:*

- Jones Ferry Rd. and NC-54
  - Restripe roadway and paint colored bicycle lanes\* across on- and off ramps.
  - Install bicycle crossing signage on off-ramps

*\*Construction projects considered to be innovative; will require state and federal approval for permission to experiment with these types of treatments*



Fig. 3-24. Jones Ferry Rd. improvements could include wide shoulders over the bridge if and when the bridge is replaced.



*Fig. 3-25. Main St. and Weaver St. (left) and Weaver St. and Greensboro St. (right) can be improved with bicycle boxes and colored bike lanes.*



***Other Intersections of Importance***

**Merritt Mill Road and Cameron Avenue**

- Coordinate with Chapel Hill on reconfiguration of pavement markings
- Remove existing crosswalks and stripe colored bicycle lane\* coming from Chapel Hill bicycle lane to line up with the Libba Cotten Bike Path ahead of vehicle stop bar.
- Remove 5-foot section of multi-use path at apex of existing crosswalks
- Realign southern crosswalk to the south along motor vehicle stop bar
- Encourage eastbound cyclists exiting the Libba Cotten Bike Path to enter the left turn lane and flow with motor vehicle traffic via special signage

**Poplar Street and NC-54**

- Install bicycle loop detectors on both sides of NC-54
- Install bicycle crossing signage on NC-54

**S. Greensboro Street and NC-54**

- Restripe roadway and paint colored bicycle lanes\* across on- and off ramps
- Install bicycle crossing signage on NC-54 off-ramps

**Barnes Street to future Morgan Creek Greenway**

- Construct bicycle and pedestrian bridge over NC 54
- Provide directional signage from Jones Ferry Rd. to Morgan Creek Greenway

*\*Construction projects considered to be innovative; will require state and federal approval for permission to experiment with these types of treatments*



### 3.6 Off-Road Bicycle Facilities (Greenways)

Off-road trails provide a more unique, comfortable experience for all levels of bicyclists and can also serve a transportation and recreation purpose. Public participants in this planning process often preferred off-road greenways as their primary bicycle routing. Two greenway corridors are particularly important for the Town of Carrboro. These include the Bolin Creek Greenway (part of which exists in the Town of Chapel Hill), and the Morgan Creek Greenway. Both the Bolin Creek Greenway and Morgan Creek Greenway were in the preliminary planning phase during the time of this planning process.

*Bolin Creek Greenway (EL-4994 TIP project)* – This would serve as the major paved north/south spine of the greenway system. This greenway could connect multiple residential areas, Morris Grove Elementary School, Chapel Hill High School on Eubanks Rd. south to Wilson Park. This greenway has the potential to tie into bicycle facilities on Estes Dr., as well as future phasing of Chapel Hill greenways. The Town should consider an effective trail surface for both transportation and environmental sensitivity.

*Morgan Creek Greenway (EL-4828 TIP project)* – This would serve as the major paved east/west spine of the greenway system, providing excellent transportation and recreation opportunities. The greenway would provide connections to the Town of Chapel Hill, Frank Porter Graham Elementary, multi-family residential areas, University Lake, the Chapel Hill Tennis Club and Jones Ferry Rd.

### 3.7 Ancillary Facilities

#### *Parking*

Based on an examination of existing bicycle parking conditions in Carrboro, the following locations either need bicycle parking, expanded bicycle parking or improved bicycle parking:

- Carr Mill Mall/Harris Teeter
- Willow Creek Shopping Plaza
- Weaver Street Market
- Town Hall
- Farmers' Market
- Century Center
- Carrboro Plaza
- Downtown
- Cat's Cradle/Arts Center Area
- University Lake Park and Ride
- Transit Stops

For more information on bicycle rack systems and options, see Chapter 7: Design Guidelines: "Ancillary Features" of this Plan.

*Improvements to Existing Facilities*

Consultant fieldwork included analysis of the existing bicycle network and a general evaluation of roadway conditions. The following road segments either contain bicycle facilities that need improvement or possess dangerous conditions for cyclists:

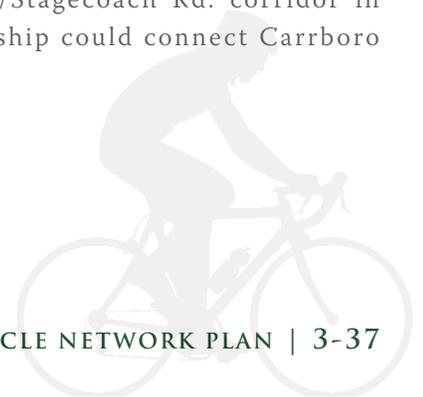
- Restripe Fidelity St. bicycle lanes to 6-foot and paint bicycle lane symbol
- Improve pavement conditions and expand width of existing bicycle lanes on Weaver St. between Main St. and North Greensboro St.
- Standardize bicycle lane symbol town-wide to nationally accepted symbol
- Restripe existing bicycle lanes on Jones Ferry Rd. near Davie
- Restripe portions of bicycle lanes on inside curve of North Greensboro Rd. near Pleasant Drive
- Improve Drainage grates on Jones Ferry Rd.
- Improve Drainage grates on Hillsborough Rd.
- Improve railroad crossing on North Greensboro St. in front of Harris Teeter
- Improve railroad crossing on East Main St.
- Attend to dangerous drainage grate on the east side of the railroad tracks on Main St.

**3.8 Regional Connectivity**

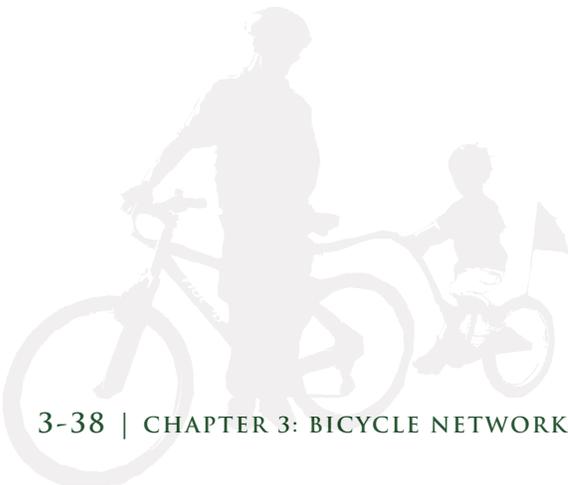
The Town of Carrboro should look beyond its town limits and link bicycle facilities to neighboring and regional destinations. It is recommended that the Town of Carrboro coordinate efforts with surrounding communities: the Town of Chapel Hill, UNC-Chapel Hill, Orange County, Chatham County and Durham County to create long distance connections for alternative transportation and recreation.

Existing regional bicycle connection efforts include the imminent construction of bicycle facilities along Old Chapel Hill/Old Durham Rd.. While these facilities lie in Chapel Hill and Durham, they are accessible via bicycle routes that connect Chapel Hill to Carrboro. Additionally, NCDOT State Bike Route #2 ([http://www.ncdot.org/transit/bicycle/maps/maps\\_highways.html](http://www.ncdot.org/transit/bicycle/maps/maps_highways.html)) already connects to Carrboro via Jones Ferry Rd., Main St., S. Greensboro Rd., and Smith Level Rd.

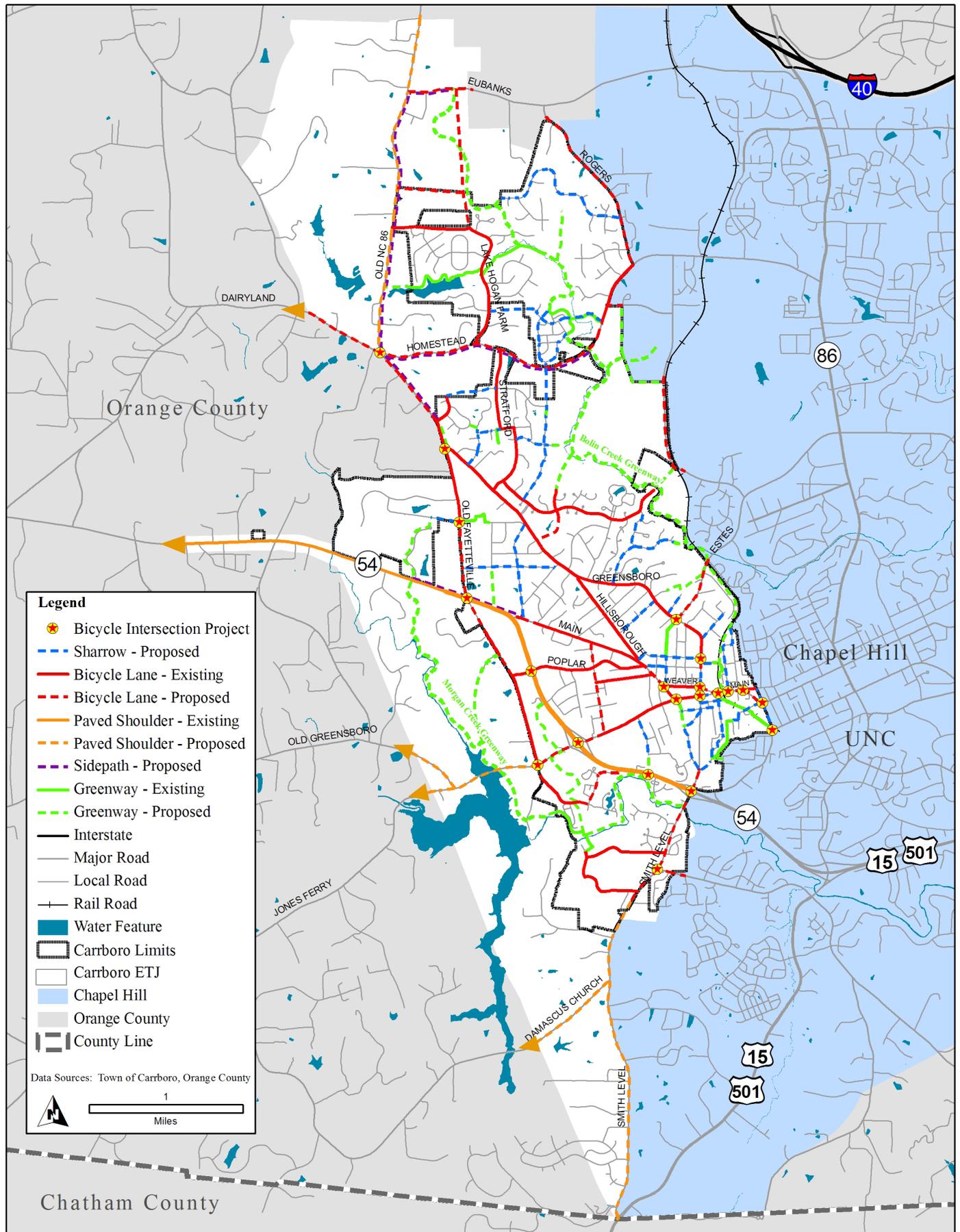
Regional greenway corridors such as the Bolin Creek Greenway and Morgan Creek Greenway will encourage and draw users from all over the Triangle into the area, boosting tourism and interest in trail expansion. Long-range efforts should be made to connect Carrboro to the American Tobacco Trail in Durham County via the Morgan Creek Greenway, Meadowmont Greenways in Chapel Hill, and along the Barbee Chapel Rd./Stagecoach Rd. corridor in Durham. This relationship could connect Carrboro



not only to surrounding communities but would tie the town into the East Coast Greenway, which is a 2000+ mile existing and planned trail that extends from Calais, MN; to Key West, FL, of which the American Tobacco Trail is an existing segment. Additionally, Carrboro should work with Chapel Hill and Hillsborough, Orange County and Chatham County on developing regional bicycle and greenway connections to the rapidly developing areas of northern Chatham County and Pittsboro.

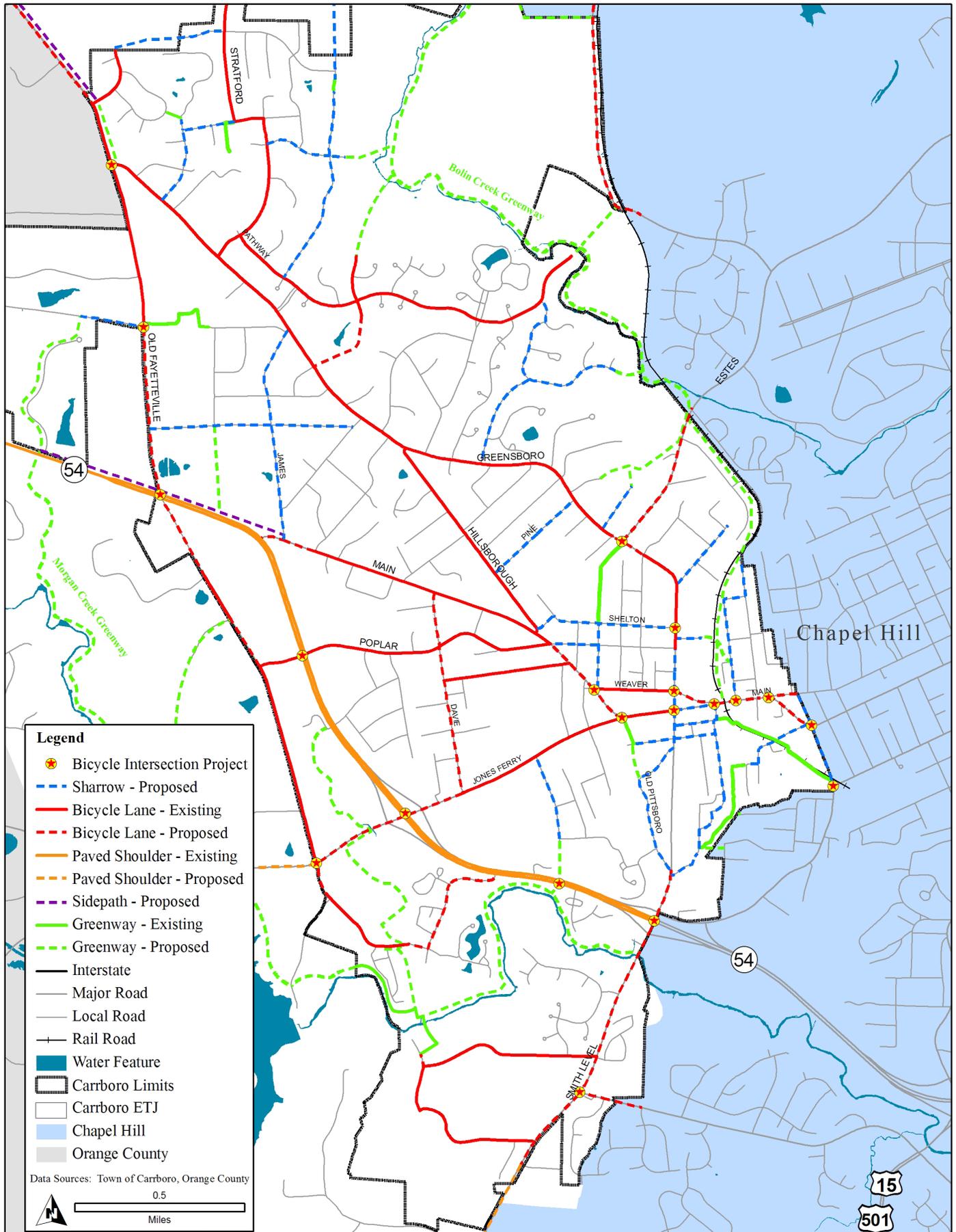


# MAP 3.2: BICYCLE NETWORK MAP



The overall proposed bicycle network for Carrboro. Note: greenway alignments are conceptual and further studies should be conducted to determine alignment.

# MAP 3.3: ENLARGED BICYCLE NETWORK MAP



*The proposed bicycle network for Carrboro zoomed into the downtown area. Note: greenway alignments are conceptual and further studies should be conducted to determine alignment.*