Chapter 5

The Recommended Plan

As we evaluate the Town's transportation network over the next 25 years, it is evident that increasing demands will be placed on the existing road network. With limitations to new construction including natural and man-made barriers it will become even more important to protect the integrity of the existing system and balance the transportation network with strategic investments in pedestrian, bicycle, and transit projects.

Successful implementation of the *Wake Forest Transportation Plan Update* will be goal-driven; that is, with a purpose. Here are the stated goals:

- Create a safe and efficient multimodal transportation system
- Coordinate transportation and land use planning to ensure that growth pays its own way
- Plan, design, and construct transportation facilities that contribute to Wake Forest's small town character and attractive appearance
- Provide safe and convenient facilities and services for people who choose not to use an automobile
- Ensure serviceable operation of existing facilities and services
- Proactively plan, in conjunction with other agencies, for well-planned transportation linkages to other parts of the Triangle region
- Identify sufficient, timely, and equitable financing mechanisms for well-timed transportation services and improvements

Successful implementation of the updated *Wake Forest Transportation Plan* will depend to a great extent on the ability of local, state, and private entities to work together. Given the scarcity of funds and competition to secure it, the Town cannot rely solely on state and federal transportation funds to implement projects. To fully implement the plan, the town will have to identify stable, timely, and equitable methods of funding the program. Wake Forest already has regulations that require development to fund certain roadway improvements that are rational and proportional to the impact created by additional traffic generated by that development. The town will continue to require developers to fund roadway improvements while seeking state and federal transportation funds through cooperative planning with the Capital Area Metropolitan Planning Organization (CAMPO) and North Carolina Department of Transportation (NCDOT).

2003 Wake Forest Transportation Plan — Updates and Amendments

The following items address necessary updates and/or amendments to the 2003 Wake Forest Transportation Plan.

- Adopt a resolution by the Wake Forest Board of Commissioners to amend the official *Wake Forest Transportation Plan*.
- Notify CAMPO of Wake Forest's resolution to amend the official plan with the following changes, noting that these changes already are consistent with the 2035 CAMPO Long Range Transportation Plan:

1. **Capital Boulevard** – interim roadway modifications must be consistent with the long-range plan to convert to a freeway through the study area. The 2003 WFTP shows a 6-lane freeway throughout Wake Forest. Since then, the regional long-range transportation plan shows building an 8-lane freeway from I-540 to Burlington Mills Road with interchanges at Durant Road and at Burlington Mills Road. Converting to an 8-lane freeway north of Burlington Mills Road is anticipated to occur after 2035. The plan should be changed to 8-lanes.

2. **Burlington Mills Road** – change the 2003 WFTP from a 5-lane section (Capital Boulevard to Ligon Mill Road) to a 4-lane median-divided section with wide striped shoulders. Change the 2003 WFTP from a 3-lane section (Ligon Mill Road to Forestville Road) to a 4-lane median-divided section.

3. **Durham Road** – change the 2003 WFTP (Wake Union Church Road to Tyler Run Drive) to a Complete Street with bicycle lanes and sidewalks on both sides. Two 10-foot sidewalks buffered by 8-foot wide landscape strips should be built.

4. **Franklin Street** – change the 2003 WFTP from a 5-lane section (Roosevelt Ave. to Holding Ave.) to a 2-lane median-divided section with bike lanes to reflect the recent reconstruction project.

5. **South Franklin Street** – change the 2003 WFTP from a 5-lane section (Holding Ave. to Rogers Rd.) to a 2-lane section with wide striped shoulders and left-turn lanes at intersections.

6. **Jones Dairy Road** – change the 2003 WFTP from a 5-lane section (Wait Avenue to Averette Road) to a four-lane median-divided road.

7. **Juniper Avenue** – change the functional classification from a major to a minor road.

Franklin Street

8. **Oak Avenue** – change the 2003 WFTP classification from a major street to a minor street. Consider building a one-lane roundabout at the intersection of Oak Avenue and Harris Road.

9. **North Main Street** – change the 2003 WFTP from a 2-lane section (Chestnut Avenue to Oak Avenue) to a 3-lane section with the addition of wide striped shoulders, curb, gutter, landscape strips, and sidewalks.

East Wait Avenue

10. **East Wait Avenue** – change the 2003 WFTP from a 3-lane section (Allen Road to Jones Dairy Road) to a 2-lane section with left-turn lanes at intersections.

11. **South Main Street** – change the 2003 WFTP from a 2-lane section (Holding Avenue to Dr. Calvin Jones Highway) to a 3-lane section. Change the 2003 WFTP from a 5-lane section (Dr. Calvin Jones Highway to Rogers Road) to a 3-lane section.

12. **North White Street** – change the 2003 WFTP from a 2-lane section (Juniper Avenue to Roosevelt Avenue) to a 2-lane section with left-turn lanes at intersections.

13. **Wingate Street** – change the functional classification from a major to a minor street. Changing the functional classification to a minor street recognizes the need to maintain balance between access and mobility. For example, Wingate Street between Durham Road and Stadium Drive balances these needs by providing two lanes of traffic for mobility and on-street parking, driveways and pedestrian crosswalks for access.

Recommended Plan

In general, the recommendations of the *Wake Forest Transportation Plan Update* support connectivity throughout the transportation network and between modes. The plan also encourages complete streets and advocates for doing more with less through access management improvements and working within the existing public right-of-way when possible. The list of recommendations includes projects listed in previous plans such as the *Wake Forest Pedestrian Plan* and *Wake Forest Bicycle Plan* as well as projects that emerged during discussions with area stakeholders, local officials, the Advisory Committee, and the general public.

Roadway Recommendations

The development of roadway projects required extensive reviews of existing congestion and safety problems, consideration of forecasts for future travel conditions given projected growth in the area, and examination of previous planning efforts. The evaluation of the existing transportation system helped identify needs and priorities. In particular, the transportation network was

placed in the context of transportation corridors and activity centers, functional classification, congestion, and traffic safety.

The challenges facing the future of the transportation network in Wake Forest are the collective result of sustained growth, continued reliance on the automobile for even short trips, and competing agendas for scarce transportation funds. As discussed in **Chapter 3**, the Town of Wake Forest is expected to continue to attract residents and employees due to its small town charm and location within the Triangle region. As a result, vehicles miles traveled and overall congestion will increase over the next 25 years.

Table 5.1 details the roadway recommendations according to expected implementation schedule. Recommendations are illustrated in **Figure 5.1**. For recommendations in NCDOT's CTP format, please see **Appendix C**.

Corridor Profiles

To provide additional information, a profile of strategic corridors throughout the planning area is presented in **Appendix A**. Included for each corridor is information on traffic volumes and relevant roadway characteristics as well as an illustrative cross section depicted the future of the roadway. The cross sections include a variety of roadway features designed to make the corridor safer for all users. On-street bicycle facilities are denoted on the cross sections with the following symbols:

- **Bike Lane** ( ) — Provides exclusive-use area adjacent to the outermost travel lane; Includes pavement markings and signage to designate area for bicycle use only
- **Wide Striped Shoulders** (**wss**) — Provides greater level of safety and comfort for bicyclists; Similar to bike lanes but without the pavement markings and signage
- **Sharrow** ( ) — Offers a compromise between dedicated bicycle lanes and unmarked outside lanes; Directs cyclists to the preferred area to cycle in order to avoid roadway debris, doors from parked vehicles, and passing vehicles

3-Deminsional Cross Sections

To further illustrate the features to be included along the community's strategic corridors, six 3-dimensional cross sections were developed. The selection is not to emphasize these corridors as the community's most important corridors. Instead, the corridors were selected because they contain features common to other strategic corridors, such as landscaped medians, two-way left-turn lanes, various on-street bicycle facilities, sidewalks, multi-use paths, and planting strips. The six 3-D cross sections follow **Table 5.**1 and **Figure 5.1**.

Table 5.1 – Recommended Roadway Projects				
Road	**Segment**	**Schedule**	**Cost**	**Description**
Short-Term Actions (2015)				
Dr. Calvin Jones Highway	US 1 to NC 98	Under construction. Complete by 2010.	15.1 million	4 lanes, no sidewalk or multi-use path.
S Main St	Rogers Rd to Forbes Rd	Designed. Build by 2015.	1.7 million	3 lanes, wide-striped shoulders, Top 20 sidewalk priority list.
N White St	County line to Roosevelt Ave	2015	TBD	Widen to provide left-turn lane and wide striped shoulders.
Rogers Rd	S Main St to Heritage Lake Rd	2015	TBD	Bridge replacement. Widen to 5-lane section with wide striped shoulders, sidewalk and multi-use path. Top 20 Sidewalk Priority List.
Stadium Dr	Capital Blvd to Rock Springs Rd	2015	TBD	Widen to provide 2-lanes with left-turn lanes at intersections. Include wide striped shoulders and a multi-use path on the south side. Top 20 Sidewalk Priority List.
Ligon Mill Rd	S Main St to Burlington Mills Rd	2015	TBD	Widen to 4-lane median-divided with bike lanes and sidewalks.
Long-Term Actions (2025 or 2035)				
Heritage Lake Rd	Rogers Rd to Heritage Heights Ln	By 2025 per LRTP	7.1 million	Widen to 3 lanes. Top 20 sidewalk priority list.
Ligon Mill Rd	Stadium Dr to Burlington Mills Rd	By 2025 per LRTP	31.5 million	Widen/Build 3 lane road with bike lanes and sidewalk both sides.
S Franklin St	Rogers Rd to Dr. Calvin Jones Highway	By 2025 per LRTP	11.4 million	Widen to 3 or 4 lanes. Top 20 sidewalk priority list.
Forestville Rd	Buffaloe Rd to Rogers Rd	By 2025 per LRTP	57.3 million	Widen to 4 lanes median-divided with sidewalks both sides.
NC 98	Jones Dairy Rd to US 401	By 2025 per LRTP	40.3 million	West of NC 96, widen to 3 lanes with bike lanes.
Capital Blvd (US 1)	Thornton Rd to Burlington Mills Rd	By 2025 per LRTP	60.5 million	Widen to 8 lane freeway with interchange at Burlington Mill Rd.
Burlington Mills Rd	Capital Blvd to Forestville Rd	Post 2035	TBD	Widen to 4 lane median-divided road with wide striped shoulders and multi-use path both sides.

Note : LRTP refers to the CAMPO 2035 Long Range Transportation Plan adopted in 2009.

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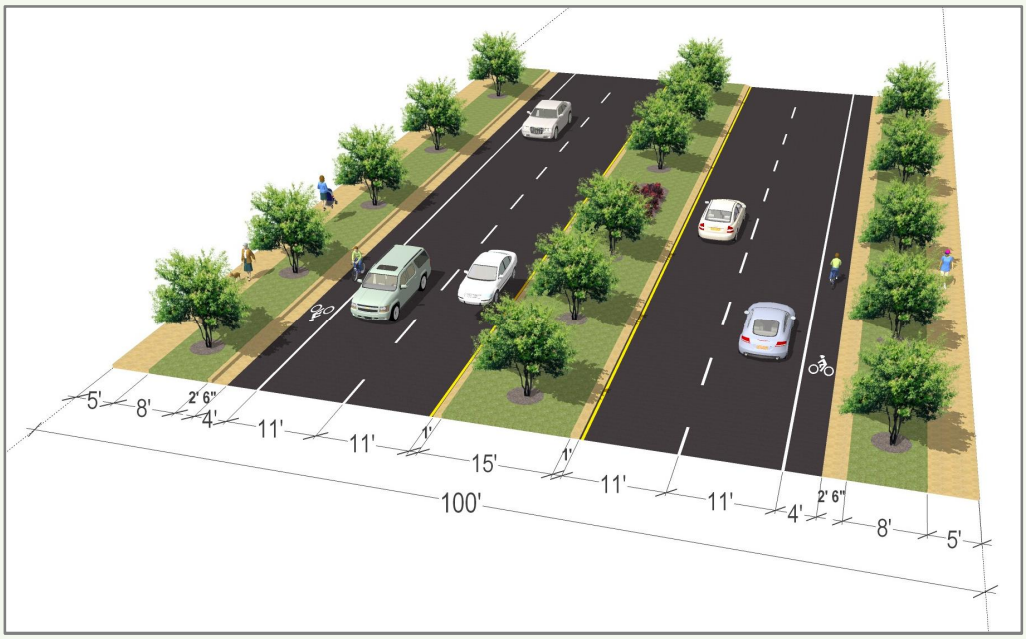
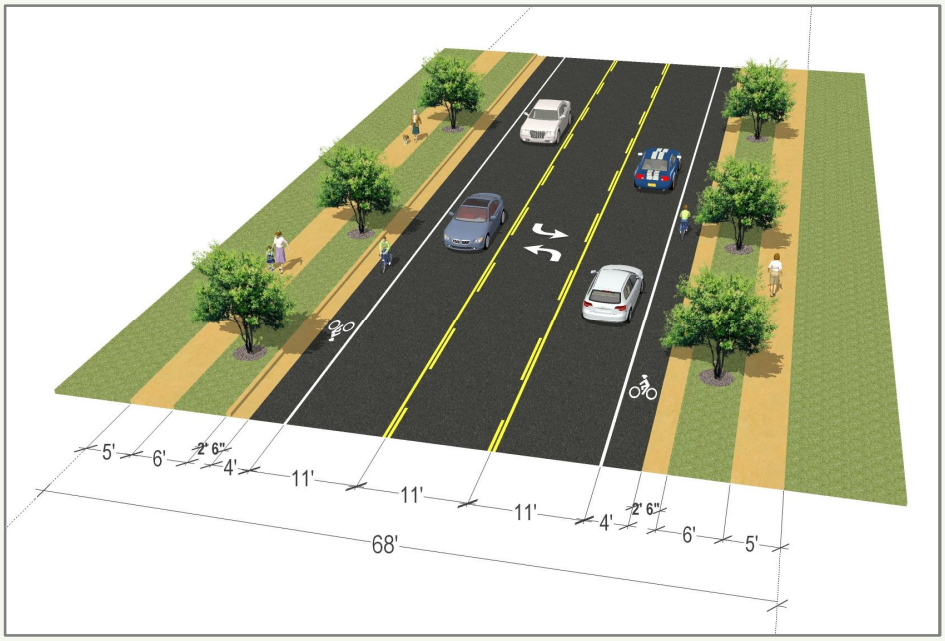
See Figure 5.1 – Highway Plan.

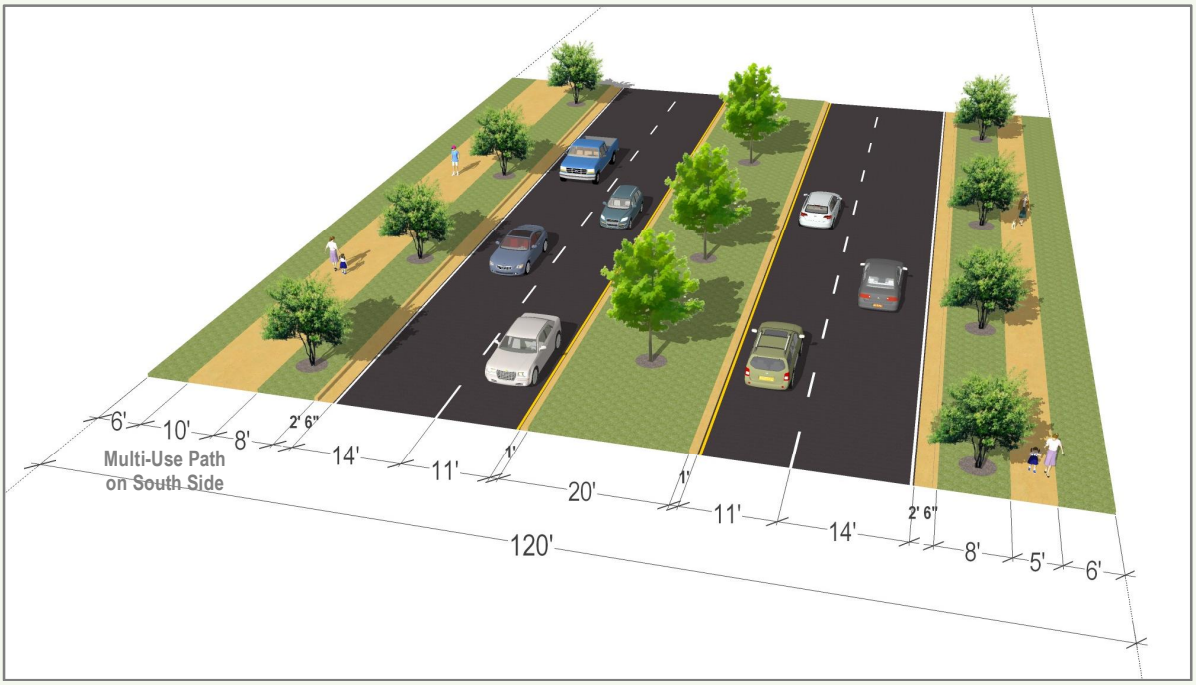
Ligon Mill Road — Dr. Calvin Jones Highway to South Main Street



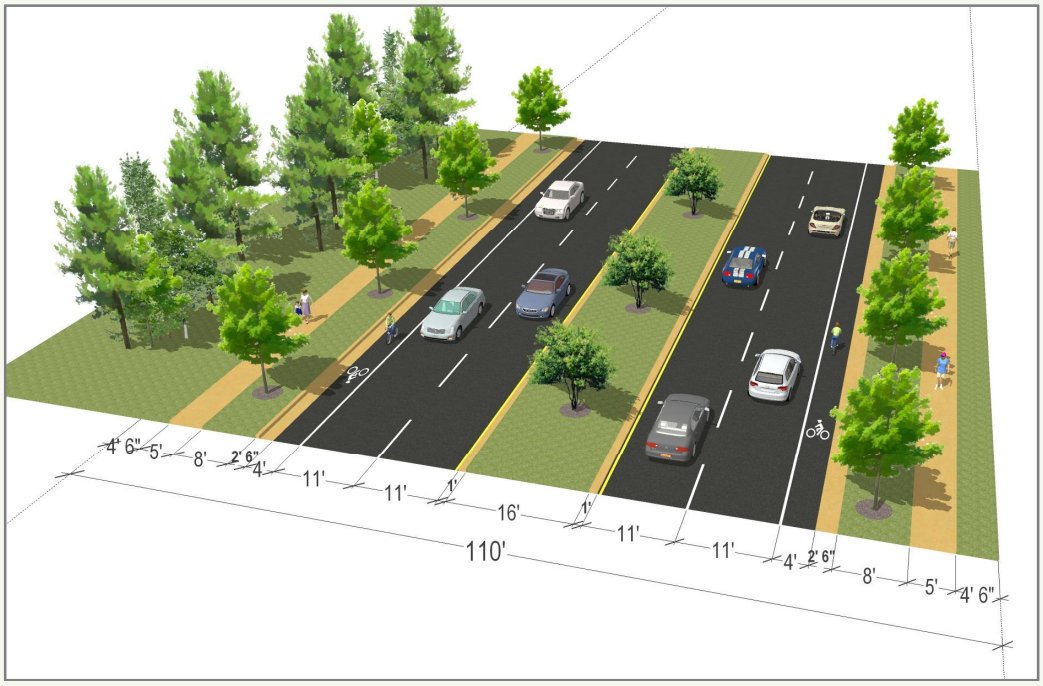
Ligon Mill Road — South Main Street to Toms Creek Bridge



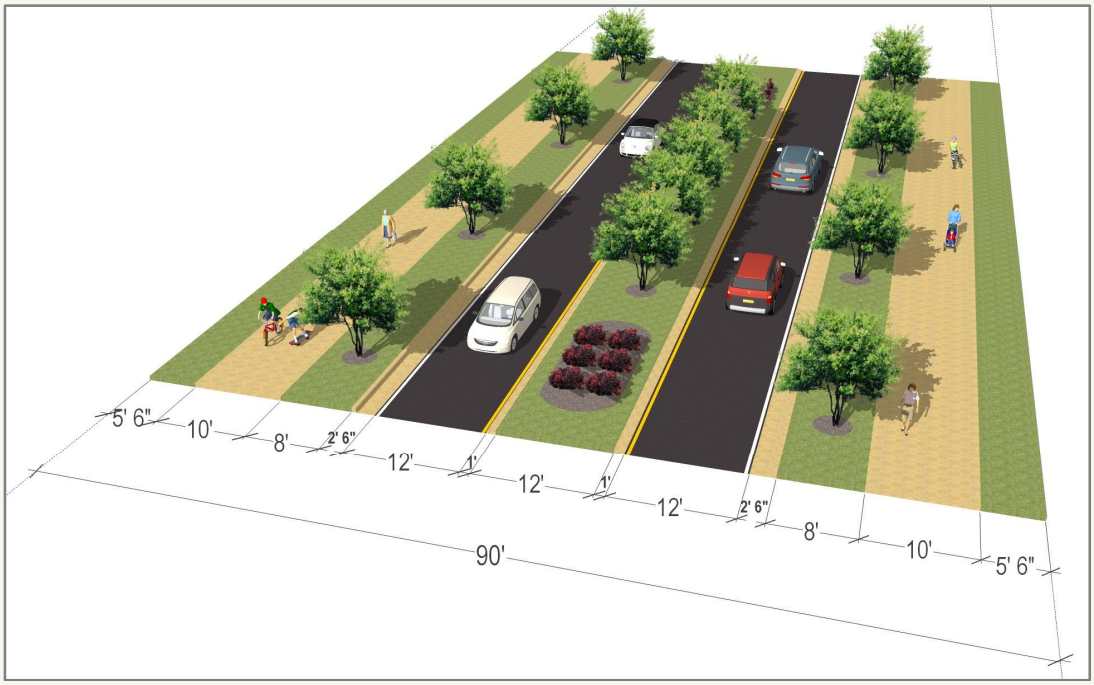
Durham Road — Dr. Calvin Jones Highway to Wake Union Church Road



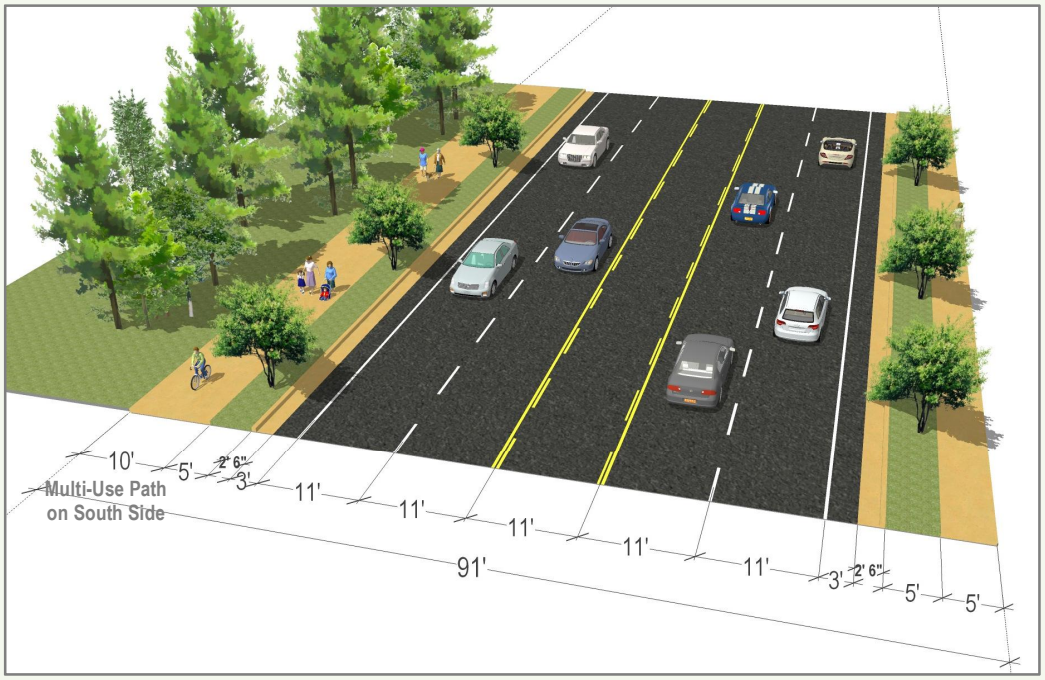
Forestville Road



North Loop — North Main Street to East Wait Avenue



Rogers Road — South Main Street to East of Heritage Lake Road



Bicycle and Pedestrian Recommendations

As described in **Chapter 2**, recent plans have provided a foundation — both in vision and in specific recommendations — to meet the community's desire for a balanced, multimodal transportation system. The bicycle and pedestrian recommendations include projects as well as program and policy recommendations that aim to:

- Support economic vitality
- Increase safety and security of the transportation system
- Increase accessibility and mobility of people
- Protect and enhance the environment
- Foster connectivity across and between modes
- Emphasize preservation of the existing transportation system

The projects and programs recommended for Wake Forest rely on the Four E's of Bicycle and Pedestrian Planning — Engineering, Education, Encouragement, and Enforcement. Addressing these interrelated components helps create a transportation network that balances the needs of bicyclists, pedestrians, and motorists.

- **Engineering** – Engineering refers to the network of pathways that must be planned, designed, and constructed. A well-planned bicycle and pedestrian system can enhance user safety and enjoyment while increasing the attraction of each mode.
- **Education** – Once the pathways are in place, new and experienced cyclists and pedestrians must be made aware of their locations and the destinations that can be reached by using them. Bicyclists, pedestrians, and motorists must be educated on the "rules of the road" to ensure everyone's safety while operating on and adjacent to the bicycle and pedestrian facilities.
- **Encouragement** – People need to be encouraged to bicycle and walk. Encouragement should become easier as the network of pathways makes the Wake Forest area more bicycle- and pedestrian-friendly. Encouragement becomes more critical as these facilities are constructed to justify their investment.
- **Enforcement** – To ensure the safety of all users and the long-term sustainability of the bicycle and pedestrian system, the formal and informal "rules of the road" must be heeded by all.

Safe Routes to Schools Recommendations

The NCDOT Safe Routes to School Program is a federally funded program initiated through the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) in 2005. The legislation establishes a national SRTS program to distribute funding and institutional support to implement SRTS programs. SRTS programs facilitate the planning, development, and implementation of projects and activities that will improve safety and reduce traffic, fuel consumption, and air pollution in the vicinity of schools. The Division of Bicycle and Pedestrian Transportation at NCDOT distributes SRTS funding through a competitive application process.

The state of North Carolina has been allocated $15 million in Safe Routes to School funding for fiscal years 2005 through 2009 for infrastructure or non-infrastructure projects. Non-infrastructure projects include education or encouragement programs to increase walking and biking to school. Infrastructure projects include the construction of pedestrian facilities within 2 miles of an elementary or middle school. Wake Forest applied to NCDOT for four SRTS grants and will be fully funded for two projects. If successful, the town will serve as the lead agency. These grants include:

- The first grant is a Community Grant for "non-infrastructure" to fund two community-wide bicycle safety rodeos. CycleSafe.org would be retained to facilitate the rodeos, conduct demonstrations, and provide helmets, bike lights, and safety literature. Target groups include fourth graders at Wake Forest and Heritage Elementary Schools and sixth graders at Wake Forest and Heritage Middle Schools. Safety tip cards would be printed and distributed to all Kindergarten through eighth-grade schools as well as the Town's Police Department.
- The second grant request is a "non-infrastructure" grant to create a Walk- and Bike-to-School Safety Awareness Program for sixth graders at Wake Forest Middle School involving the production of a video and t-shirt design contest. The video also could be shown at other schools in Wake County and statewide.
- A third grant is a "non-infrastructure" grant for Wake Forest Elementary School to have monthly pedestrian and bike activities, coordinate the walking school bus program, a t-shirt design contest, and a "We walk and roll" pedestrian challenge for fourth graders. Wake Forest will receive a $48,000 grant award for this project.
- The fourth grant is an "infrastructure" grant to build and extend sidewalks within a one-mile radius of Wake Forest Elementary and Middle Schools and provide bike racks on school grounds. At Wake Forest-Rolesville Middle School, the grant would fund a ten-foot wide

multi-use path from South Main Street onto the schoolgrounds to connect with the front entrance, with lighted bollards to enhance early morning safety. At Wake Forest Elementary School, the grant would fund pedestrian signals at South Main Street and Elm Avenue with high visibility crosswalks, more signs, a wheelchair ramp at the school driveway, and radar-feedback speed warning signs. Parking would be prohibited on South Main Street between Elm Avenue and Holding Avenue and the centerline will be repainted to create four-foot wide bicycle lanes in each travel direction. On South Wingate Street near Wake Forest Elementary School, a sidewalk will be installed on the east side between Sycamore Avenue and the northernmost driveway serving the Boys and Girls Club. Radar-feedback speed warning signs also will be installed on South Wingate Street. Wake Forest will receive a $300,000 grant award for this project.

For more information, visit www.ncdot.org/programs/safeRoutes/ or contact Sarah O'Brien at (919) 807-0774.

Smith Creek/Sanford Creek Greenway and Sidewalk Projects

The Town has applied for $3.42 million in federal funds through the Congestion Mitigation Air Quality (CMAQ) program. If approved by NCDOT, the funds will be used to extend a ten-foot wide paved Smith Creek Greenway south to the confluence of Smith Creek and Sanford Creek, a distance of nearly two-thirds of one mile. Connections also would be made to Heritage Elementary, Middle, and High School (a shared school and park campus). Additionally, the proposed improvements extend the trail 1.75 miles to the west along Sanford Creek to connect to a recently completed section of trail adjacent to the Heritage South neighborhood. Sidewalk construction is necessary along 1.25 miles of Heritage Lake Road and Rogers Roads to complete the connection to major portions of Heritage Phase I-IV and Heritage North. All new facilities will be operated and maintained by the town.

The proposed 2.4 miles of greenway trail and 1.25 miles of sidewalk will provide an alternative transportation network connecting development along Heritage Lake Road and Rogers Road. This area is the subject of repeated requests for alternative transportation facilities with every indication that the existing 7,000 residents and employees will alter their behavior to reduce congestion with increased mobility and air quality.

Pedestrian Recommendations

The *Wake Forest Pedestrian Plan* assessed the existing conditions and developed a list of facilities in need of improvement. As part of the implementation plan, these facilities were phased into one of three time-frames: short-term (0-3 years), medium-term (4-7 years), and long-term (8-10 years).

In February 2009, the Wake Forest Greenway Advisory Board recommended to the Town Board of Commissioners the following priorities be funded to bring the community together with an interconnected system of sidewalks:

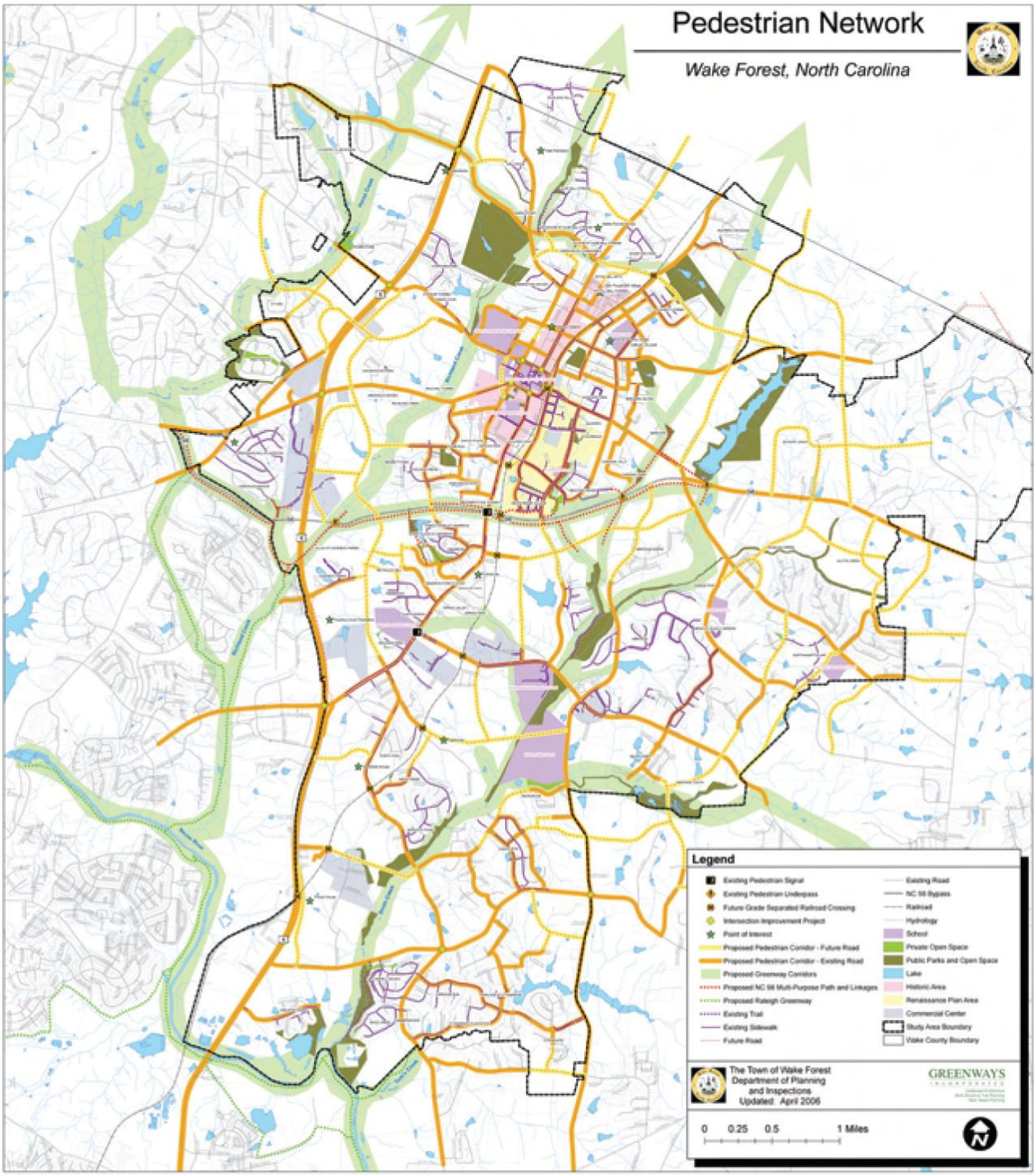
- Wait Avenue: North Allen Road to Dr. Calvin Jones Highway
- Stadium Drive: North Wingate Street to US 1
- Rogers Road: Forestville Road to South Main Street
- Oak Avenue: Harris Road to North Main Street
- Heritage Lake Road, west side: Rogers Road to Soccer Center
- Forestville Road: Rogers Road to Song Sparrow Drive
- Durham Road: Retail Drive to North Wingate Street
- S Wingate Street: West Holding Avenue to Stadium Drive
- Ligon Mill Road: Song Sparrow Drive to South Main Street
- Rogers Road: Marshall Farm Road to Forestville Road
- South Main Street: Dr. Calvin Jones Highway to Rogers Road

The top priority pedestrian corridors represent the top ranked short-term projects according to the facility's ability to serve key destinations, address safety concerns, and expand connectivity. While acknowledging the immediate benefits of improving these corridors, the plan also recommends the Town evaluate cost and feasibility of each project when determining order of construction.

As design plans are finalized for construction of the Northside Loop at Dr. Calvin Jones Highway and Jones Dairy Road, NCDOT has expressed concern for pedestrians safely crossing the large intersection. Pedestrians will not be allowed to cross Dr. Calvin Jones Highway at this intersection. Instead, they will be directed to cross Northside Loop at a realigned Wait Avenue intersection just north of Dr. Calvin Jones Highway. Sidewalks will be built on both sides of Northside Loop, with the west side walkway continuing along Wait Avenue and the east side walkway connecting with a tunnel (actually a culvert) under Dr. Calvin Jones Highway.

The recommended pedestrian map includes on-street, off-street, and multi-use paths as recommended in the Wake Forest Pedestrian Plan. **Figure 5.2** illustrates the pedestrian recommendations. For recommendations in NCDOT's CTP format, please see **Appendix C.**

Figure 5.2 – *Wake Forest Pedestrian Plan* – Pedestrian Network



Bicycle Recommendations

All citizens and visitors should be able to bicycle and walk safely and conveniently to their chosen destinations with reasonable access to roadways. To this end, on-street facilities such as bicycle lanes, paved shoulders, and wide curb lanes should be carefully located depending upon the intended character of the street and anticipated experience level of cyclists. These facilities should be supplemented with multi-use paths where appropriate.

The construction of on-street bicycle facilities – as well as sidewalks – can occur as stand-alone enhancement projects or be incorporated into public and private infrastructure projects. The second option may be more time- and cost-effective. Infrastructure projects that may involve bicycle and pedestrian improvements include roadway widening, regular street maintenance, utility work, and new road construction.

The bicycle recommendations that follow include carefully planned facilities supplemented by program, and policy recommendations.

Facility Recommendations

In 2008, the Town completed the *Wake Forest Bicycle Plan*. The facilities identified by this plan are incorporated in the *Wake Forest Transportation Plan Update*. The Town and Advisory Committee input indicated that while cost and constructability should be a consideration, need and demand for a facility should have greater priority. Thus, many of the projects listed below will require additional study, design, and possibly right-of-way acquisition which may prolong their implementation. However, they are the first projects that should be addressed due to need and demand.

The recommended bicycle facilities are introduced in **Table 5.2** and illustrated in **Figure 5.3**. The Bicycle Map is shown in the approved Comprehensive Transportation Plan (CTP) format in **Appendix C**. In addition to these recommendations, special attention should be given to improving the safety and mobility for bicyclists at the intersection of South Main Street and Capital Boulevard. When necessary, the NCDOT Division of Bicycle and Pedestrian Transportation should be consulted prior to initiating these recommendations.

Table 5.2 – Recommended Bicycle Projects		
Road	**Segment**	**Improvement Type**
Short-Term Actions		
N White St	County line to Juniper Ave	Wide Striped Shoulder
N White St	Juniper Ave to Spring St	Bike Lanes
N White St	Spring St to Roosevelt Ave	Wide Striped Shoulder
S White St	Roosevelt Ave to Elm Ave	Sharrows
S Main St	South Ave to Holding Ave	Sharrows
S Main St	Holding Ave to Dr. Calvin Jones Highway	Wide Striped Shoulder
S Main St	Dr. Calvin Jones Highway to Rogers Rd	Wide Striped Shoulder
S Main St	Rogers Rd to Capital Blvd	Bike Lanes; Multi-Use Path
Ligon Mill Rd	S. Main St to Burlington Mills Rd	Bike Lanes
Stadium Dr	Capital Blvd to Rock Springs Rd	Wide Striped Shoulders; Multi-Use Path
Stadium Dr	Rock Springs Rd to Wingate St	Sharrows
Rogers Rd	Main St to Heritage lake Rd	Wide Striped Shoulders; Multi-Use Path
Long-Term Actions		
Ligon Mill Rd	Agora Dr to Durham Rd	Bike Lanes
Ligon Mill Rd	Durham Rd to S. Main St	Bike Lanes
Rogers Rd	Heritage Lake Rd to Town Limits	Wide Striped Shoulders; Multi-Use Path
Harris Rd	Capital Blvd to Oak St	Multi-Purpose Path
Burlington Mills Rd	Capital Blvd to Ligon Mill Rd	Wide Striped Shoulder; Multi-Use Path
Burlington Mills Rd	Ligon Mill Rd to Forestville Rd	Wide Striped Shoulder; Multi-Use Path
E Wait Ave	Allen Rd to Jones Dairy Rd	Bike Lanes
Roosevelt Ave / Wait Ave	Front St to Allen Rd	Sharrows; Bike Lanes

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See Figure 5.3 – Bicycle Plan on previous page.

Program and Policy Recommendations

The facility recommendations must be supplemented with coordinated education, enforcement, and encouragement programs. Some programs instruct and encourage bicyclists and pedestrians in the full and proper use of the non-motorized transportation network. Other programs ensure the safety of the system is upheld by enforcing rules and regulations.

Program Recommendations

Near-Term

- Apply for Bicycle-Friendly Community designation from the League of American Bicyclists. Display Bicycle-Friendly Signs when permitted.
- Establish a Safe Routes to School Program
- Participate in Bike-to-Work Week
- Establish a Multi-modal Advisory Committee to recommend town action on matters relating to pedestrian, bicycle, greenway and transit

Long-Term

- Strengthen the connection with Triangle Transit and Triangle J Council of Governments to promote the Regional Travel Demand Management (TDM) Program in Wake Forest
- Develop & Distribute Educational Pamphlets
- Launch Bicycle Parking Installation Program
- Create a Bike Rodeo Event
- Create a Helmet-to-Go Program
- Conduct Monthly Bike Day
- Develop and distribute a Bicycle Facilities Map

Policy Recommendations

Near-Term

- Establish policy that requires bicycle facilities and their impacts to be included in Traffic Impact Analyses for new private development and roadway projects
- Establish school zones around all schools
- Strengthen Greenway Ordinance Requirements
- Require striped bicycle lanes and appropriate signage where called for in the Bicycle Plan
- Use the Design Guidelines section of the *Bicycle Plan* to determine the appropriate bicycle facility treatment for roadways in Wake Forest
- Require all new public facilities to have bike parking and bicycle access

Long-Term

- Require intersections to have bicycle-sensitive signals as part of development requirements and public works engineering standards
- Create an annual budget for bicycle-related improvements
- Develop a Greenways Maintenance and Safety Policy

Greenway Recommendations

Greenways, or multi-use paths, can accommodate bicyclists and pedestrians while providing a high-quality experience protected from traffic. Wake Forest completed the *Open Space and Greenway Pan* in 2002, and updated it in 2009.

The update expands upon key recommendations from the 2002 Plan and provides the Town of Wake Forest with new ideas and tools to effectively create and maintain a comprehensive open space and greenway network. The Plan Update also incorporates new design standards for trails and trail amenities, trail operations and management guidelines, and current trail construction cost estimates.

Phase One

The Smith Creek / Dunn Creek Greenway is the top priority. This greenway links downtown Wake Forest with the Neuse River Trail, thus connecting to the statewide Mountains-to-Sea Trail. The Town has built one mile of trail south of Burlington Mills Road and a section at the Smith Creek Soccer Center. A critical connection is needed at Dr. Calvin Jones Highway once Franklin Street is extended south of Dr. Calvin Jones Highway.

First, the Spring Branch spur trail is the second priority, ultimately connecting downtown Wake Forest with the Heritage North subdivision via Miller Park. Pedestrian improvements will be needed at the Dr. Calvin Jones Highway / Franklin Street intersection when the southern leg is built, including pedestrian refuge islands, countdown pedestrian signals, advance warning signs, and high visibility crosswalks.

Second, starting from the Dunn Creek underpass at Dr. Calvin Jones Highway, a spur trail could extend west to the Spring Branch corridor via a short section of sidewalk along Ledgerock Road and South Allen Road. The sidewalk connection would change back to a multi-use trail at the intersection of South Allen Road and East Holding Avenue, then continue north to Miller Park downtown.

Third, sidewalks, bicycle lanes, and shared lane markings (sharrows) are planned along Wait Avenue. The section of Wait Avenue between Dunn Creek and downtown Wake Forest should be a top priority to connect seamlessly with the trail system.

Phase Two

The second priority is Richland Creek Greenway and its connection to downtown Wake Forest via sidewalks and bicycle lanes on Stadium Drive and North Avenue. This route would serve the Wake Forest-Rolesville High School and, via connections, Joyner Park and the Old Mill Stream Greenway.

Dr. Calvin Jones Highway creates a new east/west corridor through Wake Forest. Pedestrian and bicycle facilities outlined in the adopted Corridor Plan should be pursued. Phase Two also will help establish a trail connection to Rolesville along Sanford Creek.

Greenway Priorities

The Town's Greenways Advisory Board maintains a listing of priority greenway segments. These priority greenway segments are critical to making connections in the future with Raleigh's greenway system and providing links between the Town's various major park facilities. In addition to local trails prioritized by the Town, several Wake County municipalities have begun planning for a 28-mile paved regional "Neuse River Trail" from the Falls Lake Dam to the Wake & Johnston County lines. The City of Raleigh has committed $13 million or nearly half of the funds needed to complete the trail. The first eight miles of the trail will extend from Falls of Neuse Road to the CASL Soccer Complex, with construction slated to begin by late summer/early fall 2009. The final section will extend to the Johnston County line four years later in 2013. The available funding and regional support for this trail creates a unique opportunity for Wake Forest to connect to a regionally significant trail and provide access to many miles of trail for citizens to enjoy.

Public Transportation and Rail Recommendations

Public Transportation Enhancements

Transit riders typically fall into one of two categories – captive or choice. Choice transit riders choose to leave their vehicle at home to save time and money or for other reasons. Captive transit riders use transit because they have no other choice. This may be because they lack access to a personal vehicle or because they have a physical impediment. Captive riders also include those too young to drive, the elderly, persons with disabilities, and those without the financial means to own and operate a personal vehicle.

Wake Forest has illustrated a commitment to attracting transit riders to the local and regional public transportation system by launching the Loop and WFX express routes. The recommendations that follow recognize the need to enhance existing service to meet the needs of both choice and captive transit users. An underlying goal is to encourage further dialogue regarding the benefits of transit for choice riders and the critical role transit plays in the life of captive users. A CTP map illustrating the existing and proposed public transportation and rail network in Wake Forest can be found in **Appendix C**.

Public Transportation Recommendations

Initial recommendations to enhance public transportation in Wake Forest include:

- Print and display route schedules / maps on each vehicle in service.
- Add a stop (e.g. Food Lion in Wakefield community) to reduce layover time at the transfer point (South White Street south of Elm Avenue). The layover should be no more than ten minutes. Drivers should be trained to communicate with passengers at the beginning of layovers as to the scheduled time of departure and the reason for the layover.
- Implement additional park-and-ride lot agreements along the "Loop" route.
- Perform pavement maintenance in the curb lane to reduce the bumpiness of the ride on the "Loop" route. In particular, the crossing of Capital Boulevard (US 1) on South Main Street is jarring.
- Add benches and shelters to more bus stops, based on demonstrated ridership at specific locations.

Additional Options:

- Extend weekday hours of service
- Run on holidays and/or weekends
- Add a run along the same Loop route, traveling in the opposite direction of the existing Loop, to prevent passengers from having to take the entire loop when they only want to make a short trip

Southeast Trail and High Speed Rail

The Southeast High Speed Rail Corridor (SEHSR), using existing trackage through Wake Forest, is one of five originally proposed high speed passenger rail corridors designated by the US Department of Transportation (USDOT) in 1992. The corridor was designated as running from Washington, DC through Richmond, VA and Raleigh to Charlotte with maximum speeds of 110 mph. It is part of an overall plan to extend service from the existing high speed rail on the Northeast Corridor (Boston to Washington) to major cities in the Southeast.

The USDOT in 1996 extended the SEHSR to Hampton Roads, VA. In 1998, the USDOT created two more extensions:

- from Charlotte through Spartanburg and Greenville, SC to Atlanta, GA and on through Macon, GA to Jacksonville, FL, and
- from Raleigh through Columbia, SC and Savannah, GA to Jacksonville, FL and from Atlanta to Birmingham, AL.

The highways of the region and the airports along the Eastern seaboard simply cannot handle the present traffic volumes, let alone accommodate future travel needs. An affordable, modern, timely alternative to driving crowded interstates or flying short distances is the purpose of this initiative.

The SEHSR is being designed as a passenger and freight corridor. Freight service already exists in most sections, and will be reinstituted in the currently discontinued section between Petersburg and Norlina in NC. The SEHSR is being designed with curve spiral lengths that will allow passenger trains and freights to operate on the same track, and 5 mile-long passing sidings every 10 miles on average will allow the faster passenger trains and the slower freights to meet and pass with minimal conflict. The operating efficiency for both passenger and freight service will increase dramatically as a result of SEHSR corridor improvements.

Railroad at South Elm Street

Initial environmental studies and public hearings were completed in Fall 2001 examining the need for the project and considering potential impacts on both natural and man-made environments along nine possible routes. A recommendation report was completed in early 2002, indicating that the route with the best potential for high-speed rail service and the fewest environmental impacts would run from Richmond, through South Hill, VA to Norlina, Raleigh, Greensboro (with a connection to Winston-Salem) and Charlotte, NC. The route follows a combination of existing railroads and preserved rail corridors. Travel time is expected to be about two hours from Raleigh to Richmond and another two hours to Union Station in Washington D.C. Considering recurring highway traffic congestion in Petersburg, Richmond, northern Virginia and Washington D.C. a time of four hours would be time competitive. Considering terminal time, typical airline flight delays, and travel time near Washington area airports, a time of four hours would be time competitive with air travel too.

The Federal Railroad Administration and the Federal Highway Administration issued a Record of Decision on the initial environmental studies in 2002, confirming and approving the route for the SEHSR. The project currently is in the second environmental study phase that includes more specific analysis along the preferred route between Richmond, VA and Raleigh, NC. This environmental study should be completed in early 2011, with a Record of Decision by the middle of 2011. Studies are considering an adjacent hike-bike trail within the same right-of-way.

The SEHSR project now includes a parallel multipurpose trail concept, a unique opportunity to provide additional economic and quality-of-life value for most all the towns and communities along the corridor. The trail concept would be a separate project, parallel to and outside the rail right of way, but within the SEHSR study corridor. As such, all environmental work being collected and analyzed for the rail project would be available for evaluation of the trail concept. The environmental clearance of the trail would allow trail proponents in each state to apply for state and federal funds for the eventual completion of the trail.

Incorporation of the trail concept into the SEHSR project was requested and funded by the Virginia Department of Conservation and Recreation and the

North Carolina Department of Environment and Natural Resources. The trail concept would run from just south of Petersburg to the Neuse River, north of Raleigh. It likely would become part of the East Coast Greenway, a proposed trail traversing the east coast states from Maine to Florida.

The construction and operation of the SEHSR will have a positive impact on the economies of the regions and towns it passes through. In North Carolina alone, it has been estimated the SEHSR will bring:

- $700 million in new state and local tax revenues
- $10.5 billion in employee wages over 20 years
- More than 31,400 new one-year construction jobs
- more than 800 permanent new railroad operating positions
- nearly 19,000 permanent full-time jobs from businesses which choose to locate or expand in North Carolina because of the SEHSR.

It reasonably can be assumed that similar positive benefits will accrue to Virginiafrom SEHSR's implementation.

Additional Benefits:

- New and/or improved freight access, especially for those segments with no currently active freight service.
- Decreased rate of congestion growth on the major interstate highways that parallel the rail system, benefiting local travelers who use the interstates.
- Opportunity for new or increased conventional passenger service and/or commuter service that could serve smaller communities.

The Town of Wake Forest communicated its concerns about the specifics of the rail design with the appropriate officials. Responses to town concerns are anticipated in the next major release of project documents in 2010 or 2011.