

CHAPTER 1

1.0 INTRODUCTION

The North Carolina Capital Area Metropolitan Planning Organization (CAMPO) and Franklin County initiated a corridor study for 9 miles of US 1 from US 1A (Park Avenue) within the town of Youngsville to the Vance County line, in Franklin County. The study, named the US 1 Corridor Study Phase II, is a continuation of the original US 1 Corridor Study Phase I, which ran from Interstate 540 (I-540) in Raleigh to US 1A (Park Avenue) in Youngsville. The Corridor Study Phase I was completed by NC Capital Area MPO in 2006.

The findings of the US 1 Corridor Study Phase II will be adopted into the Capital Area MPO *2040 Comprehensive Transportation Plan (CTP)* and incorporated in the Capital Area MPO *2040 Metropolitan Transportation Plan (MTP)* as appropriate.

1.1 Study Goals and Objectives

The goal of the US 1 Corridor Study Phase II is to produce a well-coordinated plan for the US 1 corridor through Franklin County and the Town of Franklinton, starting from US 1 (Park Avenue) in Youngsville and ending at the Vance County.

The plan will provide improvement and policy recommendations to maintain mobility, safety and performance standards for all modes of travel for now and in the future when the corridor is anticipated to become a freeway.

1.2 Study Process

The rural and transitional nature of the US 1 corridor in Franklin County is a key factor in this study. The alternatives development process factors in the land use compatibility and integration of context sensitive transportation solutions. A carefully defined study and public involvement process was necessary to address these critical issues. The study process included two committees, the Core Technical Team (CTT) and the Study Oversight Team (SOT). These two teams participated in the evaluation of alternatives which factored in the desires of the local community. Elements of the study process are presented in brief below and in detail in this following section. The elements of the study process included:

- Evaluating the existing conditions including the transportation network, planned transportation improvements, socio-economic and environmental issues, land uses, and constraints.

- Identifying transportation alternatives, key roadway improvements and preferred alternatives.
- Developing interim solutions through careful phasing and implementation of access management, local connector roads, and planned transportation improvements (including the proposed SEHSR alignment, railroad crossings and closures, proposed bypasses and other roadway improvements, bicycle and pedestrian improvements, and transit plans).
- Developing long-term solutions for future interchanges and freeway upgrades.
- Providing a multi-modal plan encouraging the development of safe and enhanced bicycle and pedestrian facilities as part of a local street system.
- Identifying long term opportunities for transit applications in the study area.
- Developing a local street plan that could be incrementally developed to provide alternate access for businesses and minimize or prevent future access points and traffic signals on US 1.
- Coordinating a multifaceted public involvement process throughout the project to allow for open forum on short-term and long-term plans with stakeholders, technical and oversight committees, and the general public.
- Developing an implementable plan that can guide government agencies and private developers on the future development of the US 1 corridor.

1.3 Project Overview

US 1 is a major north-south highway that generally parallels I-95 and serves the east coast of the United States, connecting major cities between Key West, Florida and Fort Kent, Maine. Regionally, US 1 provides connectivity between three state capitols: Columbia, South Carolina; Raleigh, North Carolina; and Richmond, Virginia. US 1 in Franklin County is a Principal Arterial Highway and a regional link for commuters who work in Wake County (Raleigh) and is a direct connection between I-85 and Raleigh.



The focus area of US 1 Corridor Study Phase II is the section of US 1 through Franklin County, specifically from US 1A (Park Avenue) in Youngsville, through the town of Franklinton, and

north to the Vance County line (See Figure 1-1). In this area, the study corridor consists of: the existing multi-lane US 1 highway; NC 56 which provides the primary east-west access between Creedmoor, Franklinton, and Louisburg; the CSX Railroad which roughly parallels US 1 on the east throughout the project study limits; multiple intersections; and existing parallel local roadway networks.

The US 1 Phase II Corridor through Franklin County carries over 18,000 vehicles per day in 2012 and serves rural and transitional land uses with partial access control. The corridor was divided into three distinct sections to take into account the unique land use and traffic characteristics along the corridor:

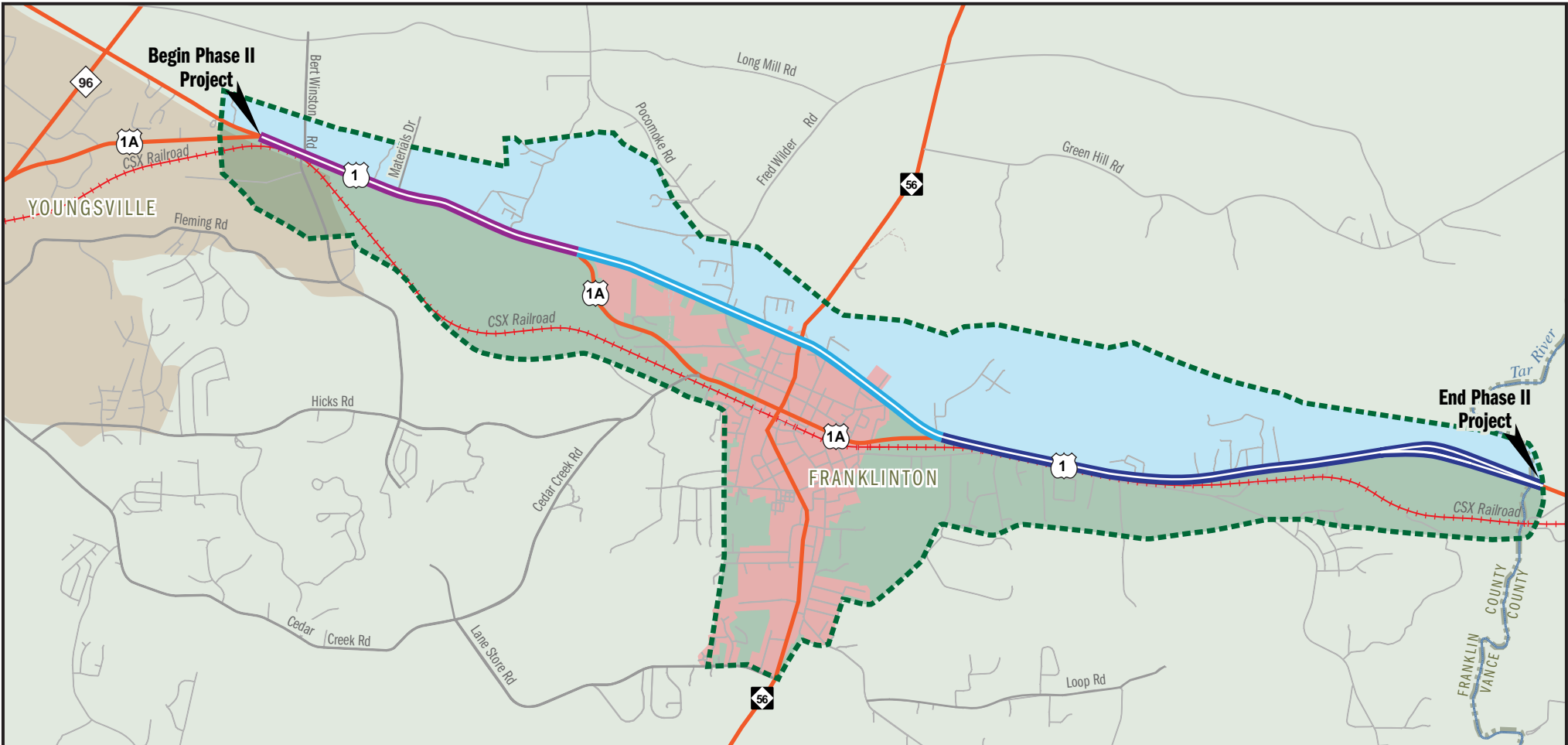
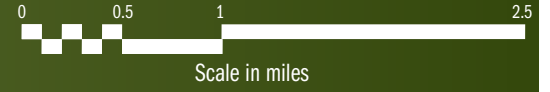
- **South Section:** This section extends from US 1A (Park Avenue) in Youngsville to the US 1A (South Main Street) junction south of the Town of Franklinton (See Figure 1-2A). This area is predominantly rural, consisting of isolated residences, light industrial facilities, and agricultural lands. This section is also an environmentally sensitive area where US 1 crosses tributaries of the Tar-Pamlico River Basin.
- **Central Section:** This section extends from the US 1A (South Main Street) junction south of the Town of Franklinton to the US 1A (North Main Street) junction north of Franklinton (See Figure 1-2B). This is the most developed area within the project limits, consisting of commercial establishments and established residential neighborhoods within the Franklinton town limits.
- **North Section:** This section extends from the US 1A (North Main Street) junction north of Franklinton to the Vance County line (See Figure 1-2C). This section is a rural area, which consists of low density residential neighborhoods and agricultural lands. The CSX railroad tracks are located just east of US 1, limiting development potential and the need for access from the east.

1.4 Future Vision

The Study Team will evaluate and identify interchange, local street, bicycle and pedestrian and multi-modal alternatives to establish a clear transportation vision for the US 1 corridor.

1.4.1 US 1 Corridor Study Phase I

The US 1 Corridor Study Phase I, examined the US 1 corridor from I-540 in Raleigh to US 1A (Park Avenue) in Youngsville. It presented a comprehensive corridor management plan to preserve the functional integrity of US 1 and to manage the overall growth within the corridor. The analysis was performed in three phases to screen, evaluate, and select viable alternatives. A



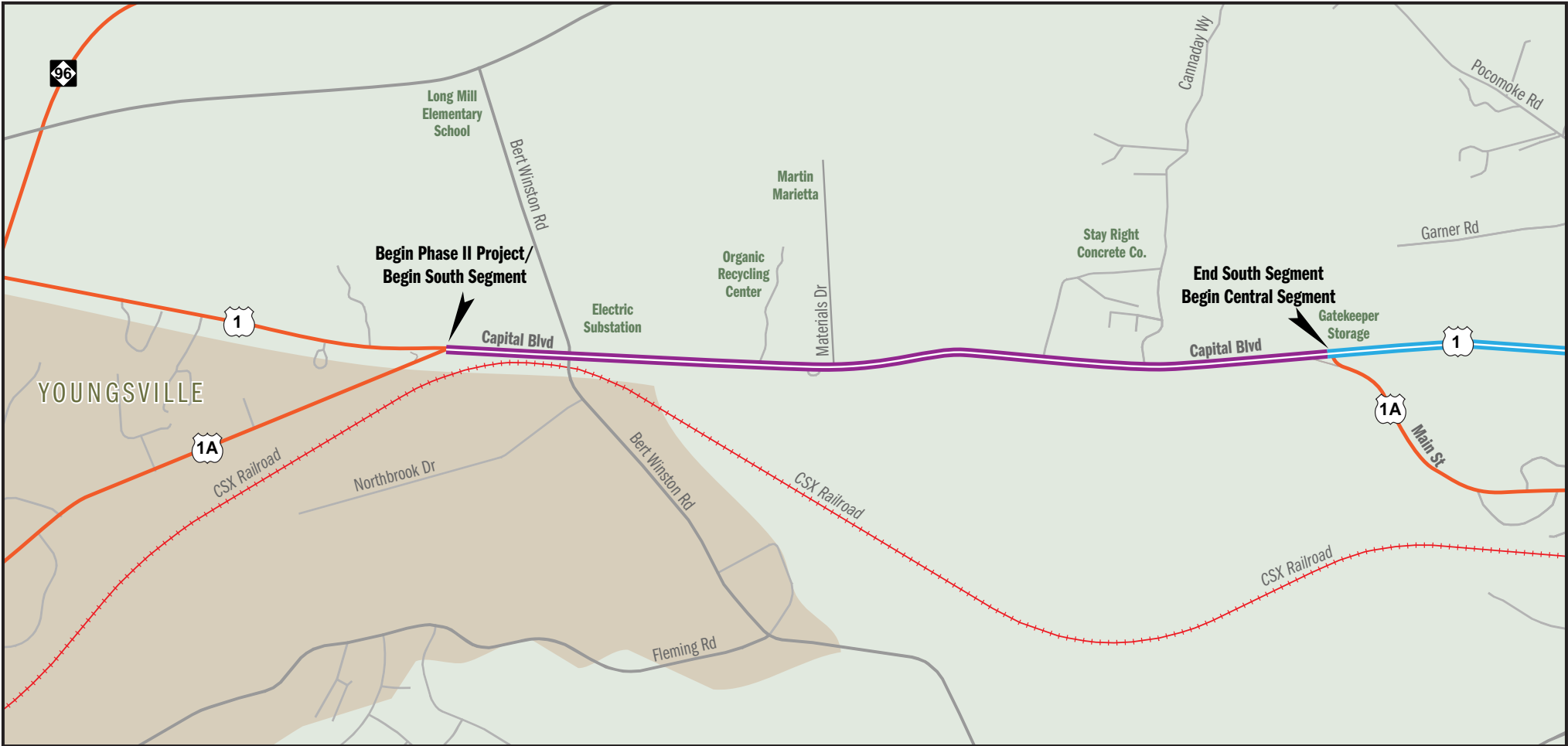
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- - - Phase II Study Boundary
- South Segment
- Central Segment
- North Segment
- East Section
- West Section
- Franklin Town Limits





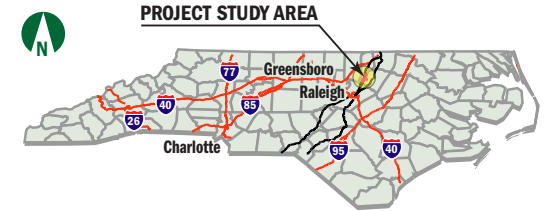
PROJECT STUDY AREA

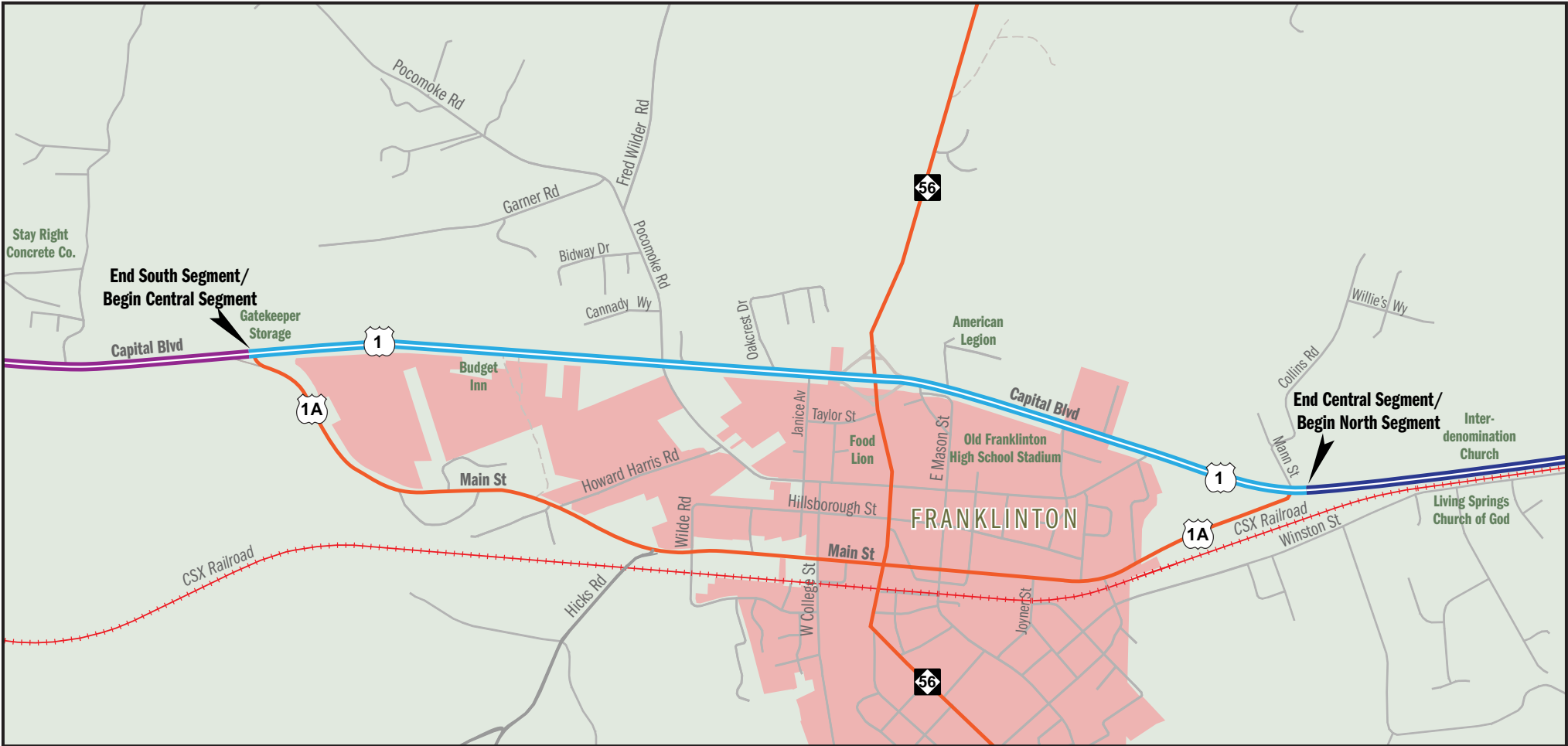




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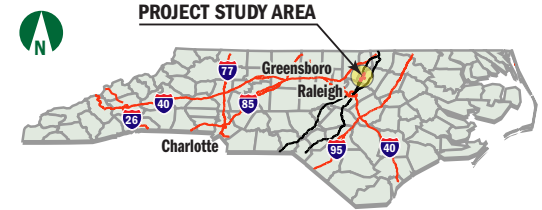
-  South Segment
-  Youngsville Corporate Limits

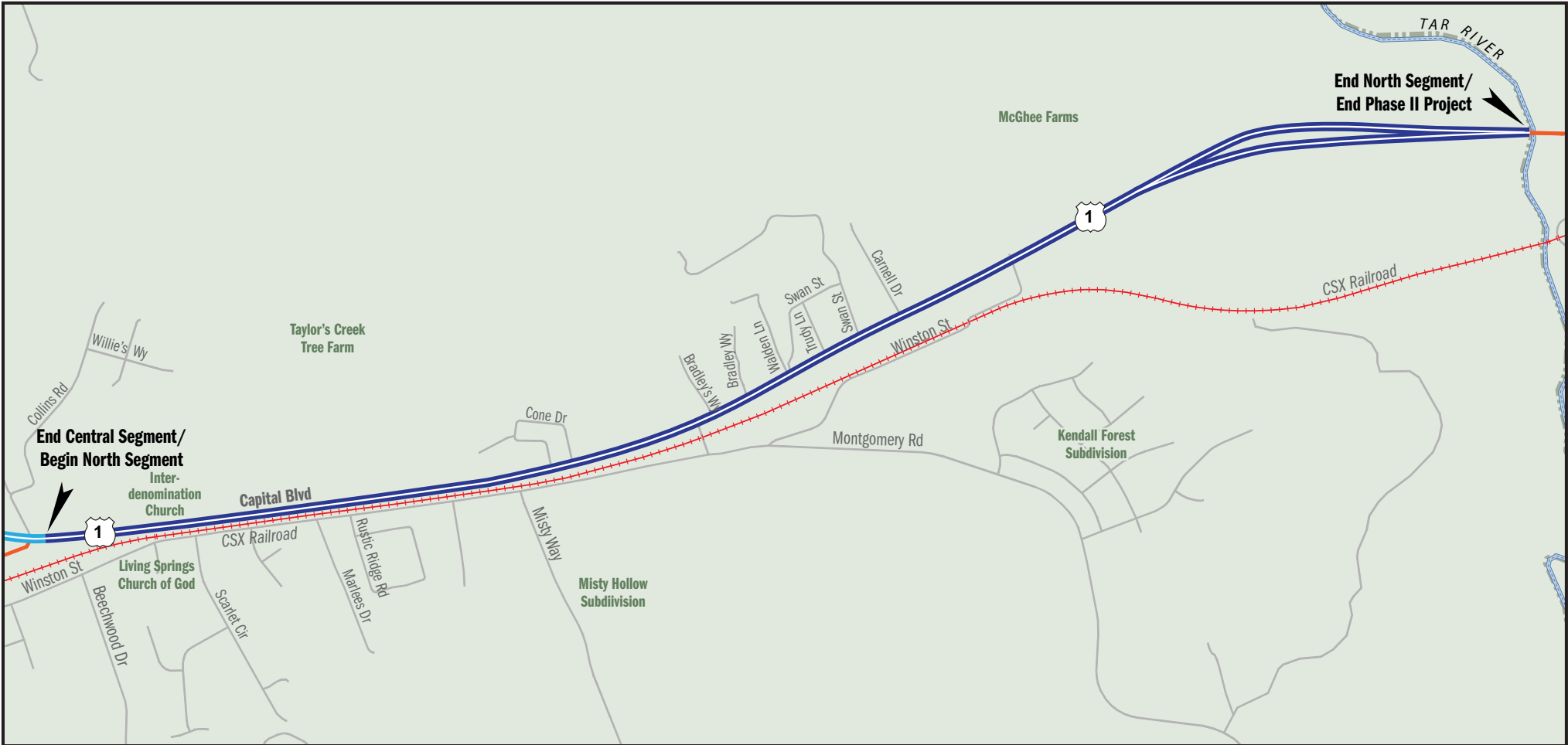




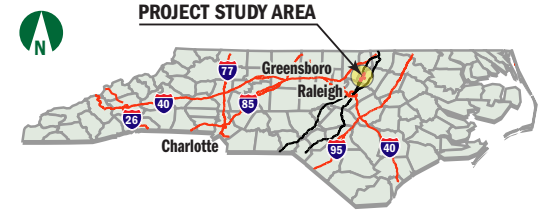
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- Central Segment
- Franklinton Corporate Limits



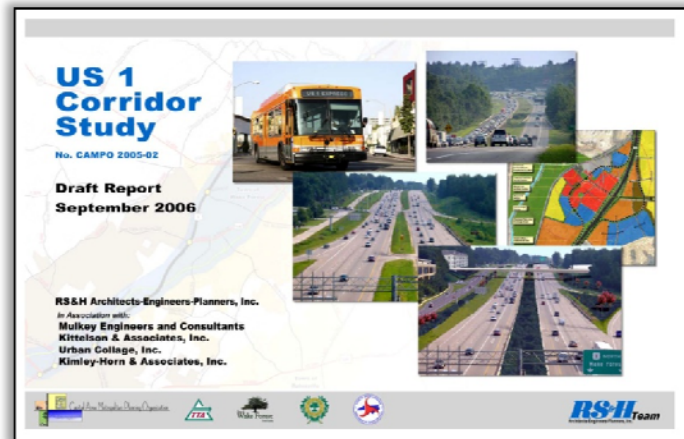


LEGEND
 North Segment



locally preferred alternative was selected, and an implementation strategy was developed. A key provision was the development of a memorandum of understanding (MOU) between governing entities to encourage implementation of the plan in the consideration of all new development. The MOU also facilitated that implementation of the US 1 Council of Planning (COP) to assist local jurisdictions in evaluating development and improvements on the corridor.

The US 1 Corridor Study Phase I locally preferred alternative included completion of frontage/backage roads, improvement to US 1 to a full-access controlled freeway with interchanges, and grade-separations of US 1. The local street enhancements will minimize and ultimately eliminate the need for direct access to US 1, promote east-west connectivity over US 1, and improve pedestrian and bicycle access on the local streets. Transit recommendations



included conversion of commuter bus service to bus rapid transit service, development of an intercity rail station, and other transit related expansions. Long-term improvements were considered beyond the 2040 horizon year and will include the completion of US 1 as a freeway and potential completion of intercity rail service within the corridor. The US 1 Corridor Study Phase II will use the Phase I document as a basis, and will build from it.

1.4.2 Land Use

The future vision for land use in the vicinity of the US 1 corridor is to preserve the residential and rural nature of the corridor while supporting regional economic growth. Using input from stakeholder groups, public workshops, and the SOT and CTT meetings, the study team developed future land use plans and identified opportunities to enhance land use planning to consider preservation, sustainability, and quality of life while allowing for growth consistent with the US 1 corridor ultimate freeway vision.

1.4.3 US 1

The future vision for US 1 is to improve transportation mobility and traffic safety with the ultimate goal to provide a full access-controlled freeway linking I-540 in Raleigh to I-85 in Vance County. This vision is shown in the NCDOT Strategic Highway Corridor Vision Plan. Present conditions on the US 1 corridor will be evaluated and used to formulate interim and future visions, which are key aspects of the study in order to develop an implementable plan.

1.4.3.1 *Ultimate Freeway*

The final recommendations will include new interchanges and a freeway typical section for US 1. The final Phase I recommendation that includes a 4/6-lane freeway with median for future improvements was evaluated at the transition area in the vicinity of US 1A (Park Avenue). The need for a freeway, and the appropriate freeway configuration and typical section were evaluated through Level of Service (LOS) traffic analysis and traffic models.

1.4.3.2 *Interim Superstreet*

Interim Superstreet alternatives will provide short-term options that can: improve traffic operations and safety; be implemented for lower costs than a freeway; and ultimately be phased into a freeway. The access management will consider current and future land uses, apply the Complete Street concept (accommodations for bicycle, pedestrian, and transit), and promote development of a system of frontage and backage roads that will later take the burden of local traffic as Superstreet intersections are systematically closed.

1.4.4 **Local Street Network with Complete Streets Philosophy**

The focus of this study is to develop a multi-modal network that utilizes the existing local street network along US 1. The multi-modal network will be developed through the evaluation of local street connector alternatives (frontage roads, backage roads, and alternative accesses to residential neighborhoods and businesses) and will consider safe and efficient use by vehicular and freight motorists, transit, bicyclists and pedestrians. A future transit vision will be developed utilizing current transportation plans as a base, including short-term and long-term improvements.

1.4.5 **Bicycle and Pedestrian**

The future vision for bicycle and pedestrian facilities within the project limits is to provide for bicycle and pedestrian access using the Complete Street philosophy on the local street network (and future preferred local street connectors and US 1 over/under passes). This updates the County's current bicycle and pedestrian plan, which is focused on downtown Franklinton. The existing local roadway network was evaluated for future bicycle and pedestrian facilities. Proposed local street alternatives will be enhanced with bicycle and pedestrian facilities consistent with the Complete Streets concept. Land uses that could be enhanced by providing bicycle and pedestrian facility connectivity will be identified in plans and appropriate facilities will be provided.

1.4.6 Transit

A key issue for the study area is the provision of transit services as an alternative to traditional vehicular focused travel patterns. Although it is recognized that Franklin County is primarily rural, and that development will likely transition into a more suburban environment, options for transit are examined, and potential opportunities for express bus, park and ride lots, and other transit are suggested.

1.5 Review of Local Plans

The Study Team reviewed and evaluated available roadway, bicycle and pedestrian, transit, and rail studies conducted within and nearby the project limits. A brief summary of each study is presented in the sections below.

1.5.1 CAMPO-DCHC 2035 Long Range Transportation Plan (LRTP)

The NC Capital Area MPO and the Durham-Chapel Hill-Carrboro MPO are two organizations charged with transportation decision-making responsibilities in the Research Triangle Region. The NC Capital Area MPO and the Durham-Chapel Hill-Carrboro MPO developed the 2035 *LRTP* as the guiding documents for future investments in roads, transit services, bicycle and pedestrian facilities and related transportation activities to accommodate the expected growth in the region. In 2030, the LRTP recommendation for the US 1 corridor is a corridor study to determine the feasibility of High Speed Occupancy Vehicle (HOV) lanes and review access management options from I-440 in Raleigh to Wake Forest. The transportation options considered for managing congestion are:

- US 1 widening and conversion to a freeway
- Access management improvement to US 1 in interim improvement
- Express bus service
- HOV lanes on US 1 as a freeway south of NC 98 Bypass
- Extend Triangle Transit Authority (TTA) rail to Durant Road or Wake Forest
- The 2035 *LRTP* recommendation includes the following improvements to the US 1 corridor:
 - 2035 US 1 roadway improvements from I-540 to Thornton Road (project F11-1a), existing 4-lane highway to proposed 8-lane freeway

- 2035 US 1 roadway improvements from Thornton Road to Burlington Mills Road (project F11-1b), existing 4-lane highway to proposed 8-lane freeway
- 2035 interchanges at Thornton Road and Burlington Mills Road
- 2025 light rail transit on US 1 up to I-540 (Triangle Town Center)
- 2025 commuter rail transit from Raleigh to Wake Forest
- 2025 local bus service from Wake Forest to Youngsville
- 2035 express bus service from NC 98 and Wake Forest to the town of Franklinton

It should be noted that the 2035 LRTP recommended roadway improvements to US 1 are approximately 10 miles south of the US 1 Corridor Study Phase II study limits. No improvements on US 1 within the study limits are included as part of the 2035 LRTP.

1.5.2 Franklin County Comprehensive Transportation Plan

The *Franklin County Comprehensive Transportation Plan* (CTP) is a joint effort between Franklin County municipalities, NCDOT, the NC Capital Area MPO, and the Kerr-Tar Regional Planning Organization (RPO). The plan and maps have been adopted by Franklin County, the towns of Centerville and Louisburg, the NC Capital Area MPO (June 15, 2011), and the NCDOT (July 7, 2011). The maps have been endorsed by the Kerr-Tar RPO and the towns of Bunn, Franklinton, and Youngsville. Elements of the Franklin County CTP roadway improvements within the US 1 corridor study area are shown in Figure 1-3 and include:

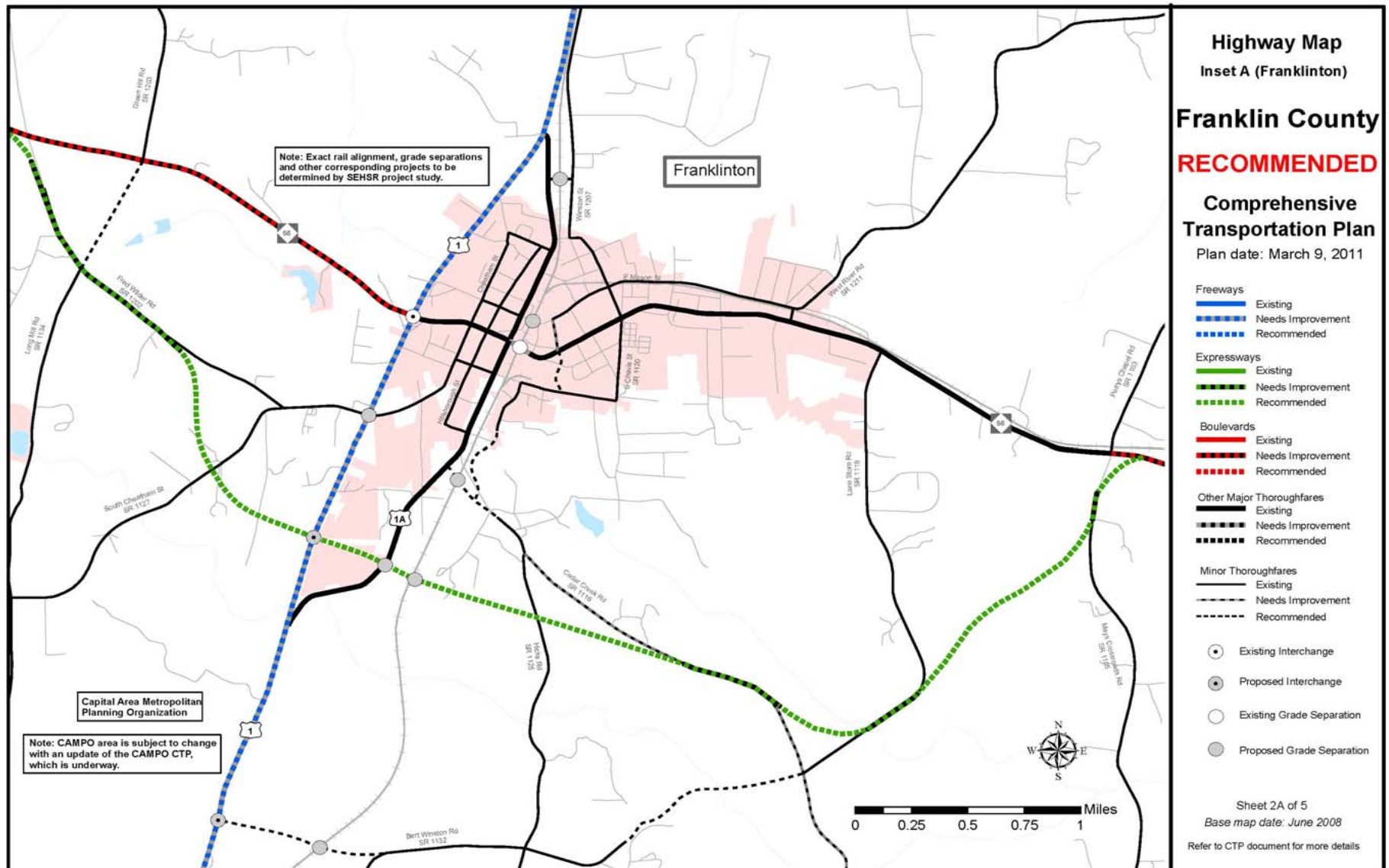
1.5.2.1 North Youngsville

- Improvements to US 1 (freeway) through Youngsville (6-lane divided facility full access control)
- Improvements to NC 96 at US 1 and south of downtown Youngsville
- Improvements to Cedar Creek Road and Cross Street
- Recommended NC 96 Bypass from US 1A to NC 96 south of Youngsville
- Recommended Fleming Road and Cedar Creek Road realignments
- Recommended (US 1 Phase I Study) frontage/backage roads

1.5.2.2 Franklinton

- Improvements to US 1 (freeway) through Franklinton (6-lane divided south of NC 56 and 4-lane divided north of NC 56 with full access control)
- Proposed NC 56 Bypass of Franklinton

Figure 1-3. Franklin County Recommended CTP – Highway Map



- Improvements to NC 56 west of US 1 and east of Perrys Chapel Road
- Improvements to Fred Wilder Road, Cedar Creek Road, Lane Store Road east of Cedar Creek Road, and Mays Crossroads Road in the vicinity of NC 56
- Improvements to Tanyard Street and recommended extension to College Street
- Recommended Long Mill Road extension to Green Hill Road
- Recommended Cedar Creek Road realignment to Hawkins Street
- Recommended NC 56 Bypass (southwest and southeast of Franklinton)
- Recommended Bert Winston Road connection and extension to US 1
- Proposed US 1 interchanges at the new Bert Winston Road extension and the NC 56 Bypass
- Proposed railway grade separations at the intersections of CSX/SEHSR and the new Bert Winston Road extension, the NC 56 Bypass, the Cedar Creek Road realignment, Mason Street, and the proposed SEHSR roadway connection (between US 1A and Winston Street north of Franklinton)
- Proposed grade separation at the intersection of US 1 and Pocomoke Road/Cheatham Street and the intersection of the proposed NC 56 Bypass and US 1A south of Franklinton

1.5.2.3 *Franklin County CTP bicycle and pedestrian improvements within the US 1 corridor study area:*

Elements of the Franklin County CTP bicycle and pedestrian improvements within the US 1 corridor study area are shown in Figure 1-4A and Figure 1-4B and include:

- Recommended bicycle facility improvements in downtown Franklinton (Hillsborough Street, Green Street, Mason Street, and Cheatham Street)
- Recommended pedestrian facility improvements in downtown Franklinton (Hillsborough Street, Green Street, Mason Street, Cheatham Street, and College Street)
- Recommended bicycle facility improvements on Pocomoke Road, Hicks Road, Cedar Creek Road, Fleming Road (north Youngsville), and NC 96 (north Youngsville).
- Recommended multi-use path east of US 1 and the CSX/SEHSR alignment (through Youngsville and Franklin) throughout the project limits
- Recommended multi-use path along an abandoned CSX railroad from downtown Franklinton heading to Louisburg (north of NC 56)

Figure 1-4A. Franklin County Recommended CTP – Bicycle Map

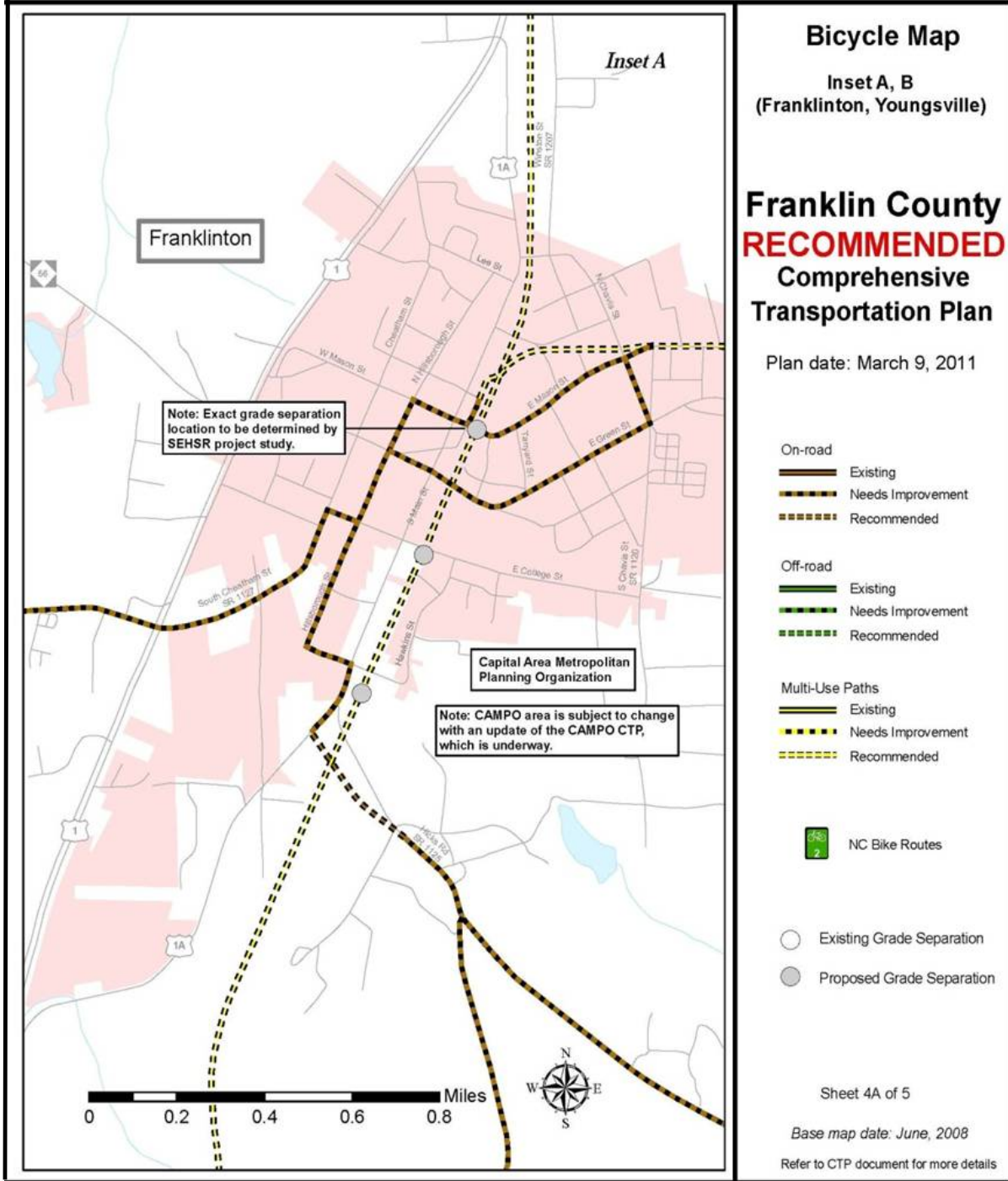
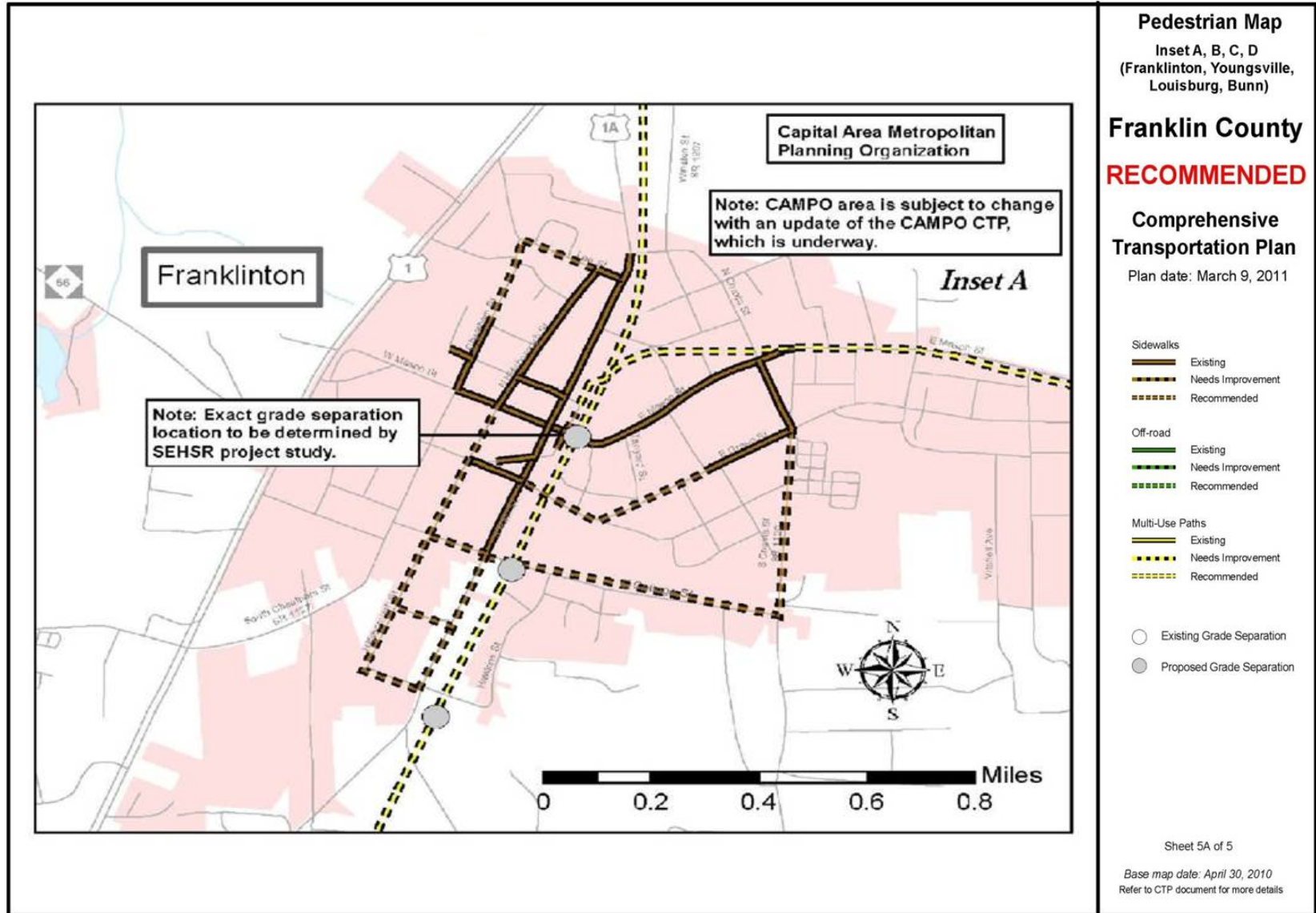


Figure 1-4B. Franklin County Recommended CTP – Bicycle Map



- Three proposed pedestrian grade separations of the railroad tracks with CSX/SEHSR in downtown Franklinton

1.5.2.4 *Franklin County CTP transit and rail improvements within the US 1 corridor study area:*

Elements of the Franklin County CTP bicycle and pedestrian improvements within the US 1 corridor study area are shown in Figure 1-5 and include:

- Recommended express bus route on US 1 (LRTP) from Wake County to Youngsville, Franklinton, and the Vance County line with proposed bus stop at US 1 and NC 56
- Recommended bus route through downtown Franklinton to Louisburg
- Recommended Southeast High Speed Rail corridor east of US 1 on the CSX railroad line

1.5.3 **Triangle Transit Short-Range Transit Plan**

The Triangle Transit Authority *Short-Range Transit Plan* prepared July 23, 2008, is a five-year transit operating plan and capital program for public transportation and ridesharing services in Wake, Durham, and Orange counties. The plan proposes to expand the regional bus system. One of the planned service improvements (near the project limits) for fiscal year 2009 was to provide a local circulator service that feeds into the Triangle Transit express service on behalf of the Town of Wake Forest. In 2011-2012, the plan proposed to increase the frequency of the Wake Forest Express. No extension of service into the Phase II study area is proposed.

1.5.4 **South East High Speed Rail (SEHSR)**

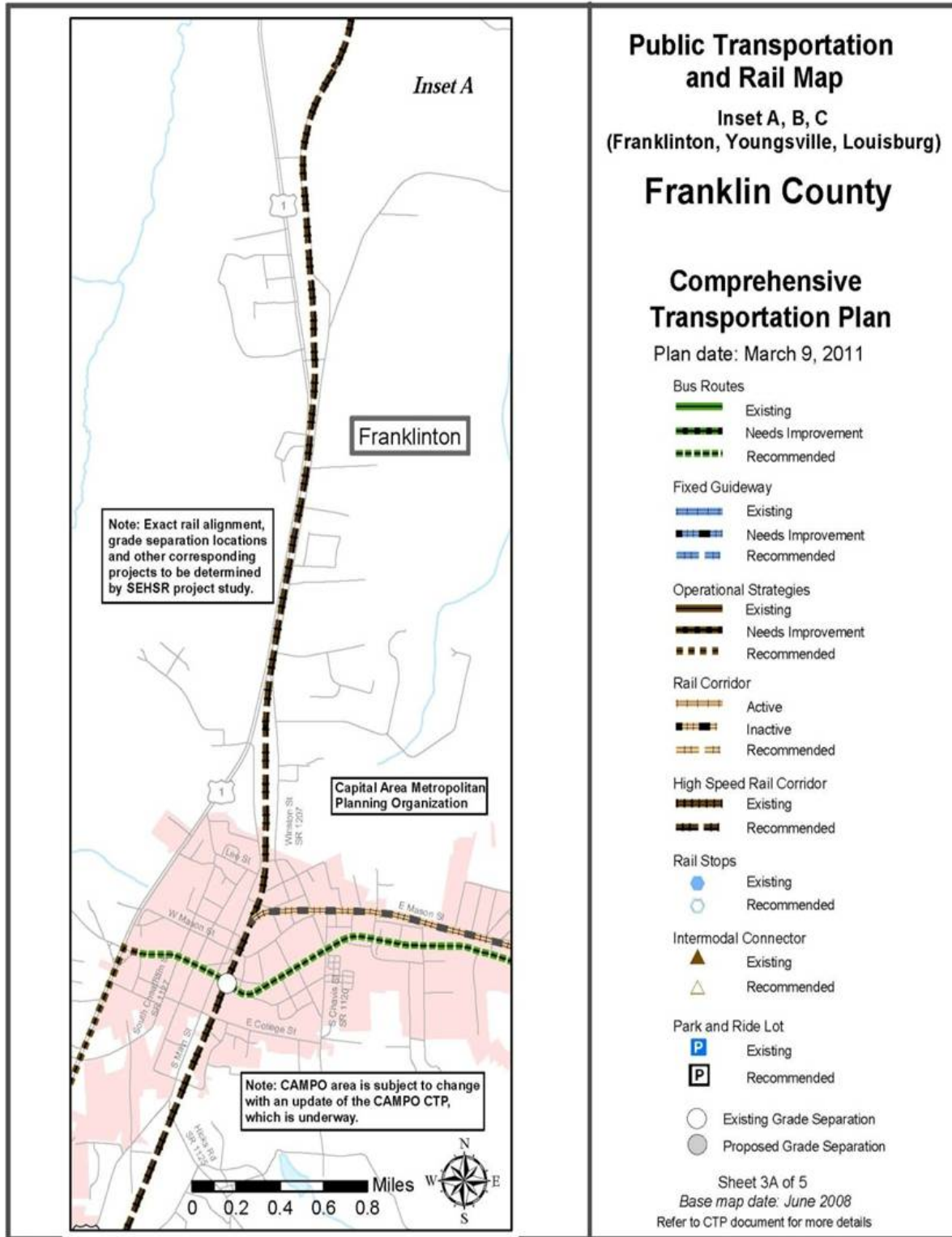
1.5.4.1 *SEHSR Tier II Draft Environmental Impact Statement*

The NCDOT Rail Division, the Virginia Department of Rail and Public Transportation (DRPT), the Federal Rail Administration (FRA) and Federal Highway Administration (FHWA) are working together to develop the 450-mile SEHSR corridor from Washington D.C. through Richmond, Virginia, and Raleigh, North Carolina, to Charlotte, North Carolina.

The Tier I Draft Environmental Impact Statement (EIS) completed in 2002 covered the entire project limits at a program level, to establish the overall project purpose and need along the preferred corridor. The plan proposes high speed rail on the CSX railroad line paralleling US 1 and crossing through Franklinton.

The Tier II Draft EIS, which was completed in May 2010, included detailed environmental analysis within the preferred corridor between Richmond, Virginia, and Raleigh, North Carolina. Three railroad alignment alternatives (NC1, NC2, and NC3) were evaluated in North

Figure 1-5. Franklin County Recommended CTP – Transit & Rail Map



Carolina. Each alternative included highway improvements where necessary. Several alternatives shared a common alignment in some areas, such as in the vicinity of the US 1 Corridor Study Phase II project limits (where NC1 and NC3 are shown throughout the project limits). The proposed rail improvements in the vicinity of the US 1 Corridor Study Phase II project limits include:

- New single track with 5-mile long sidings every 10 miles
- Maximum authorized speed of 110 mph
- Three alternative rail alignments

A key impact of the SEHSR is the closure of multiple at-grade crossings and their replacement with grade-separated crossings. This reduction in future railroad crossings will affect connectivity in the current roadway network across the tracks. Grade separations and at-grade closures recommended by the SEHSR in the study area include:

- **Full grade separations at the following locations:**
 - Bert Winston Road (with realignment of Northbrook Drive)
 - Proposed Bert Winston Road extension
 - Proposed NC 56 Bypass
 - Proposed Cedar Creek Road realignment
 - NC 56
 - Proposed connector from Winston Street to US 1A
 - Proposed connector from Montgomery Road to US 1
- **Closures of the following at-grade crossings:**
 - Northbrook Drive
 - Cedar Creek Road
 - Hillsborough Street
 - College Street
 - Mason Street
 - Joyner Street
 - Pearce Street
 - Cambridge Drive

- Medlin Road
- Winston Street (closed prior to 2012)

A Multi-use Greenway Concept is being evaluated in the SEHSR EIS that would allow a greenway to be built on separate right-of-way from the rail system, but in the same study corridor. The Multi-use Greenway Concept is being evaluated at the request of Virginia's Department of Conservation and Recreation and the North Carolina Department of Environment and Natural Resources, and findings will be documented in the Final EIS based on the location of the preferred railroad alternative. The greenway will typically follow old, unused rail right-of-way when the rail alignment is on new location. The Multi-use Greenway Concept may be incorporated into the East Coast Greenway which is a developing trail system between Canada and Key West, Florida, linking all the major cities of the eastern seaboard. According to NCDOT Rail Division representatives, the Final EIS is anticipated to be approved in early 2013.

1.5.5 SEHSR Final Recommendation Report Tier II Environmental Impact Statement

The *Final Recommendation Report* of the Tier II EIS was published in February 2012. This report presents the recommendations of the Virginia DRPT and the NCDOT Rail Division to the FRA regarding the preferred rail alternatives for the SEHSR corridor between Richmond, Virginia, and Raleigh, North Carolina.

These recommendations include only the selection of the preferred rail alignments. They do not include preference for highway improvement alternatives associated with the SEHSR. Highway improvements and revisions are currently under consideration based on public comment. Any substantial roadway changes will be presented to the public and published in the Final EIS.

According to the *Final Recommendation Report*, the recommended SEHSR rail alternative in the vicinity and within the US 1 Corridor Study Phase II project limits is Preferred Alternative NC1 (common with Alternative NC3). South of Franklinton, the alignment of Preferred Alternative NC1 is closer to the existing railroad compared to Alternative NC 2. North of Franklinton, the general alignment of Preferred Alternative NC1 is farther from the existing railroad compared to Alternative NC 2.