

# CAPITAL BOULEVARD



# CORRIDOR STUDY

## Briefing Book

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## Overview

### Introduction

Capital Boulevard, from the I-440 beltline to downtown, is one of the most visible and important transportation corridors in Raleigh. Not only is it the primary gateway to the city's core, but it offers compelling opportunities for redevelopment, environmental restoration, open space creation, and mobility enhancement. By connecting downtown with an expanding “midtown” growth center, the successful re-imagining of Capital Boulevard could catalyze millions of dollars in new development and associated tax revenue, create jobs, offer a variety of housing options accessible by transit, and create unique destinations for the city and region. Capital Boulevard is perhaps the premier location within the city to advance the City's Comprehensive Plan and to transform the corridor into a vibrant mixed-used area that reflects the direction of a 21st century city.

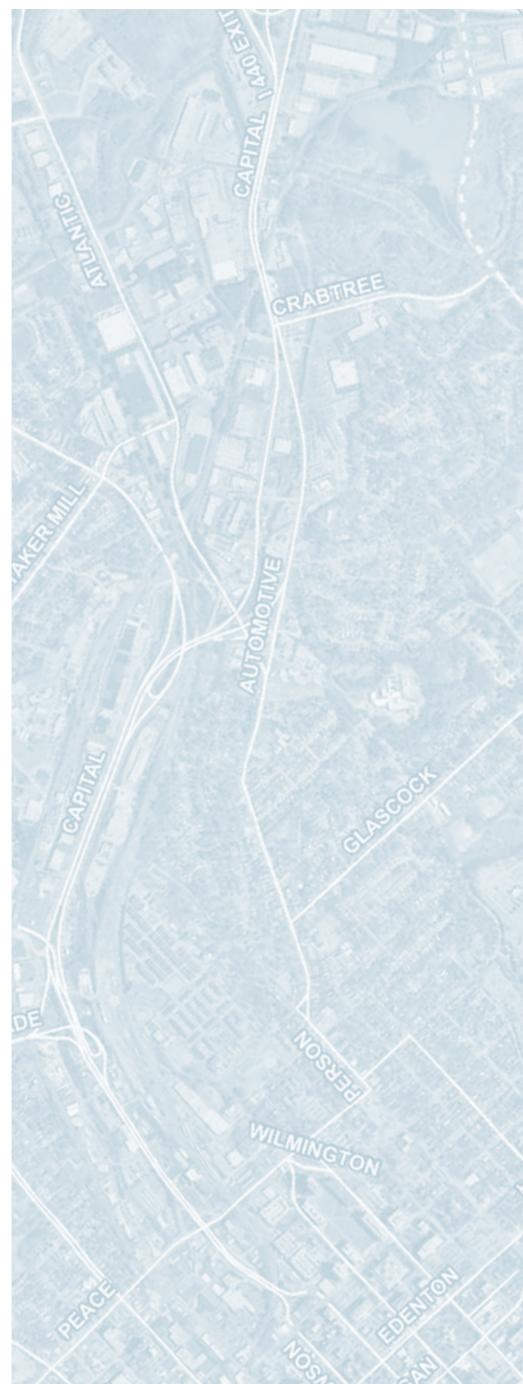
However, there are significant obstacles to realizing this opportunity. Current physical conditions both within the right-of-way and adjoining private and publicly-owned property are not conducive to realizing the latent value that resides within the corridor:

- Of the four major gateway corridors into downtown Raleigh, Capital Boulevard is both the most heavily traveled, and the most complex in terms of its design and function.
- The corridor is flanked by two active rail corridors—the Norfolk Southern Secondary and CSX S-Line—complicating access and cross-town connectivity.
- Existing land use patterns and bridge configurations provide significant barriers to right-of-way expansion.
- Poor access to adjacent land uses and a substandard image have kept away the type of retail, service, office, and multifamily developments that are typically attracted to high-volume arterial roadways.
- Pedestrian and bicycle accommodations, as well as transit amenities, are mostly substandard or non-existent.
- North of Atlantic Avenue, a significant amount of land along Capital Boulevard is located within the 100-year floodplain. This includes all the property located in the wide median north of

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Atlantic Avenue, as well as property located in the vicinity of Crabtree Creek. Flooding has been an issue in both areas in the recent past.

- Covered over with multiple culverts and surrounded by development characterized by large amounts of pavement and minimal amounts of stormwater control, the Pigeon House Branch has the most impaired water quality of any waterway in Raleigh.

### Plan Purpose

The Capital Boulevard Corridor study will tackle each of these issues head on, through a major rethink of the corridor's functional design and the relationship of the built environment to the natural features of the Pigeon House Branch. Desired outcomes include enhanced mobility, multi-modal accessibility, improved water quality, reduced risk from floods, new mixed-use development, and a greenway link from Crabtree Creek to Downtown Raleigh.

To achieve these outcomes, major changes to both the public infrastructure and private development patterns are needed. This study will serve as an important first step. Past efforts at improving Capital Boulevard have focused on initiatives of modest cost—street trees and landscaping, public art, and the regulatory control of signage. With the easy actions already largely in place, bolder and more ambitious plans are required for Capital Boulevard to realize its full potential. Fortunately, these plans can draw on multiple funding sources from local, State and Federal agencies, as well as the private sector.

### Briefing Book

This briefing book has been assembled to serve as an informational resource and to generate interest in the Capital Boulevard Corridor Study. The briefing book includes the draft scope of work for the project, the proposed study area, a corridor history, and topical base maps. This collection of corridor relevant facts and conditions will help to inform participants of existing opportunities and constraints and to stimulate creative thinking about solutions.

- A scope of work is included to explain the proposed planning process and opportunities for public involvement. The proposed scope follows a traditional planning trajectory, but includes an enhanced workshop-driven public outreach effort and intergovernmental “inreach” strategy.
- A timeline provides a historical description of the corridor's evolution from the 1940s to the present. This element not only details the construction timeframe of the roadway, but also identifies the corresponding land use development, the growth of railroads adjacent to the corridor, and flooding events in the vicinity.
- A catalogue of maps illustrating existing conditions within the corridor study area is also included. These maps range from natural features to the built environment, as well as the current regulatory framework and land use recommendations.



Wake Forest Road  
during flood of 1973.

*FROM AN N&O PHOTO*

# Scope of Work

## Executive Summary

As the most heavily-traveled gateway into downtown Raleigh, Capital Boulevard looms large in the landscape of the city. Raleigh's 2030 Comprehensive Plan identifies the corridor as the site of new mixed-use development, transportation enhancements, water quality improvements, and new linear open spaces. Significant constraints stand in the way of these goals, yet the magnitude of the opportunities argue for a fresh rethink of the function and appearance of the corridor. A twelve-month study culminating in a conceptual plan and framework will provide a significant first step in this direction.

### Key Process Features

- The public, property owners, and governmental stakeholders are consulted up front to define the study area, identify key questions, and refine the scope.
- The process and interim work products draw an explicit link between the magnitude of the public investments contemplated, and the potential for private investment along the corridor.
- The plan contents will work backwards from implementation to ensure that the recommendations can realistically be carried forward.
- Intra- and inter-governmental coordination is built into the process given the overlapping jurisdictions along the corridor, public ownership patterns, and interrelated nature of the issues.

### Phase 1: Project Scoping

- Internal Working Group Brainstorming
- Governmental Stakeholder Roundtable
- Public Workshop
- Refined Scope and Study Area

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**Phase 2: Inventory and Analysis**

- Transportation Conditions
- Environmental Conditions
- Infrastructure
- Economic and Market Analysis
- Soft Site Analysis
- Urban Design Inventory
- Issues and Opportunities Report
- Public Design Workshop

**Phase 3: Options**

- Land Use Scenarios
- Transportation Improvements
- Open Space and the Public Realm
- Green and Gray Infrastructure
- Implementation Options
- Governmental Stakeholder Presentation
- Public Meeting & Input

**Phase 4: Recommendations and Report**

- Future Transportation Studies and Projects
- Open Space Plan
- Capital Projects
- Zoning Recommendations
- Renderings and Sketches
- State-level Regulatory or Policy Needs
- Proposed Comprehensive Plan Amendments

Note that a full year is proposed to complete the study, from project initiation to delivery of a draft report to the City Council and Planning Commission.



Fairview Interchange flyover under construction.

*FROM AN N&O PHOTO*

**1961**

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## History

## Historical Snapshots

**Summer Flood: The 1908 Freshet\***

August 26 and 27: The rain has ceased in Fayetteville. In the upper reaches of the river and in the Raleigh area, rain continues to fall. The creeks and branches are filled with rushing water, spread and grip tenaciously the countryside, bury the land, claim many homes and the Cape Fear roars ominously.

[...] Business is paralyzed, railroad traffic at a standstill.

[...] The new steel bridge on the main line of Atlantic Coast Line RR, two miles from town, anchored with 20 cars of lumber, is endangered by rushing water and debris. Tracks to the north are so flooded that no southbound trains can reach the town.

*News & Observer 08-20-61*

*\*freshet: the flood of a river from heavy rain or melted snow*

**Boulevard Opened In Ceremonies**

Downtown Boulevard is officially open.

Its first formal use began Wednesday at noon against a background of music, speechmaking, and food in dedication ceremonies. Taxpayers stood on the Peace Street bridge for ribbon-cutting ceremonies and heard praise for the \$1,616,000 project designed to greatly relieve traffic conditions in the City of Raleigh.

[...] Graham (of the State Highway and Public Works Commission) explained, the Downtown Boulevard is not a rural superhighway. He said space was limited, much of the area was under flood level and complications were numerous and expensive.

[...] The project serves to create industrial sites and "should represent an added desirable feature in the development of local industries, employment and service to all citizens."

*News & Observer 10-27-55*

**\$ 250,000 Bridge Planned On Downtown Boulevard**

Plans for a \$250,000 grade separation at the intersection of Downtown Boulevard and Fairview Road were disclosed yesterday at a meeting of the Raleigh City Council.

City manager W.H. Carper told members of the City Council that the State Highway Department was planning an overhead bridge to eliminate a hazardous traffic condition at the intersection.

*News & Observer 06-02-59*

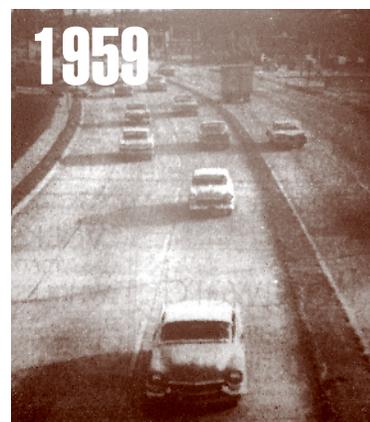


FROM NSO PHOTO

Dignitaries, including A. F. Graham, Mrs. Vance Baise, Senator Scott, and Mayor Wheeler, attend the boulevard opening.



Downtown Boulevard and Wade Avenue interchange



FROM NSO PHOTO

Median strip is extended toward downtown from Wade Avenue interchange.

## CAPITAL BOULEVARD TIME LINE

### 1959: Thoroughfare Plan, Raleigh Urban Area — Main recommendations concerning Capital Boulevard

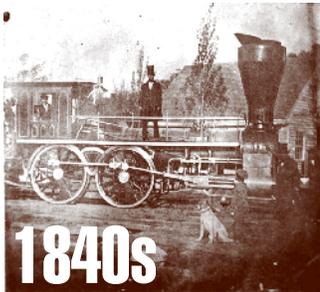
- Future industrial growth in Raleigh is expected to be concentrated along the Seaboard and the Southern railroads. Large industrial areas will have bordering residential development for industrial employees.
- Peace Street to be widened to 55 feet.
- Wade Avenue to be connected to the Downtown Boulevard System.
- The new connection to US-1 is insufficient for free-flowing traffic.
- Blount Street and Person Street should become a one-way pair.
- Wake Forest should be widened to 44 feet.

### 1967: Thoroughfare plan — Main recommendations concerning Capital Boulevard

- Atlantic Avenue to create new north-south connection.
- Wade Avenue to be extended across the corridor to connect to Glascock.
- New North-South freeway to carry US-1 through Oakwood between East and Bloodworth.



### HISTORIC OVERVIEW OF ROAD BUILDING IN CAPITAL BLVD VICINITY



Raleigh & Gaston RR locomotive "Romulus Saunders." FORSYTHE COUNTY PUBLIC LIBRARY

**1947-1948:** Louisburg Road connected with US-1.  
**November 1949:** Contracts authorized for construction of Downtown Boulevard (first contract is not assigned until 1953).

**October 26<sup>th</sup> 1955:** Inauguration of the first section of Downtown Boulevard from Downtown Raleigh to Five Points. The roadway is praised for its ability to support industrial development.

**December 20<sup>th</sup> 1958:** First beautification project plants trees along the corridor.

**January 1<sup>st</sup> 1958:** Inauguration of the second section completing the connection between North Boulevard and US-1.

**September 15<sup>th</sup> 1961:** Inauguration of the flyover interchange on Fairview.

**December 19<sup>th</sup> 1961:** A study to consolidate and eliminate direct driveway access to Capital Boulevard is undertaken, but mostly goes unheeded as new development proliferates.

**September 26<sup>th</sup> 1963:** Speed decreased to 25 miles/hour at southern "s" curve due to accidents and overturned trucks.

**November 21<sup>st</sup> 1969:** A lane is added to Downtown Boulevard between Wade Avenue and Wake Forest to increase capacity.



FROM N&O PHOTO

### HISTORIC OVERVIEW OF RAILROADS CLOSE TO CAPITAL BLVD

**1840:** Raleigh and Gaston Railroad opens.

**1900:** Name changed to Seaboard Airline.

**1906:** Norfolk & Southern Railroad opens.

**1942:** Seaboard Station built (now Logan's).

**1967:** Seaboard Airline name changed to Seaboard Coast Line.

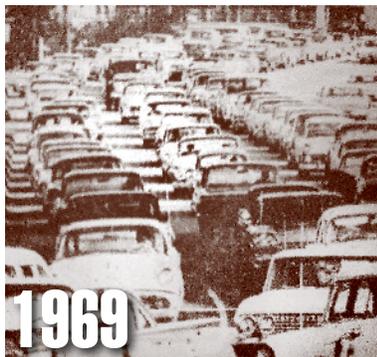
### FLOOD ACTIVITY IN THE VICINITY OF CAPITAL BLVD CAUSED BY PIGEON HOUSE CREEK

**August 26<sup>th</sup> 1908**  
**July 1916**

**August 28<sup>th</sup> 1949**

**May 28<sup>th</sup> 1963**

CAPITAL BOULEVARD TIME LINE



1969  
FROM N&O PHOTO

**1979: Comprehensive Plan**

- North-South Freeway designation removed
- Dawson-McDowell one-way pair established

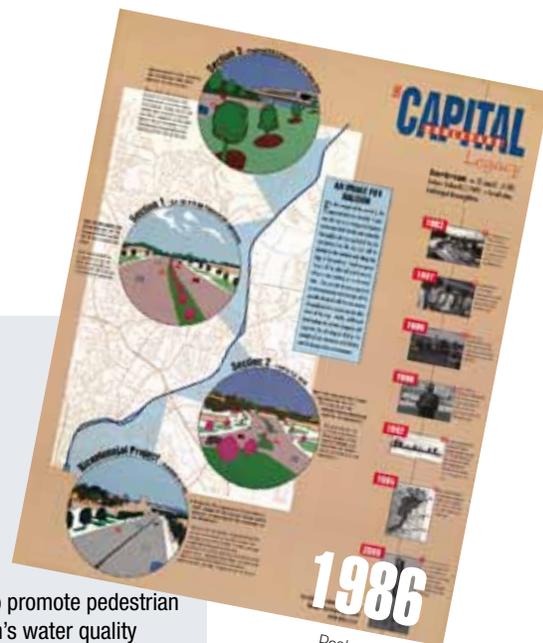
**1986: Bicentennial Boulevard Project**

**Design actions:**

- Civic signage improved
- Public art installed
- Street trees planted
- Street lights updated

**Planning recommendations:**

- Study potential north/south greenway to promote pedestrian walks and improve Pigeon House Branch's water quality
- Enhance Peace Street interchange
- Connect Wade Avenue to Halifax Street
- Increase land use flexibility & includes residential as option



1986  
Poster promoting beautification of Capital Boulevard

1970

**May 1970:** Downtown Boulevard becomes the busiest highway in North Carolina, carrying 54,500 vehicles per day.

**1974:** Traffic volumes peak at 64,000 vehicles per day. Volumes stay under 60,000 vehicles per day until 2007, when counts once again reach 60,000.

**1974:** Southern Railroad Company acquires Norfolk Southern.

**February 2<sup>nd</sup> 1973**  
**June 29<sup>th</sup> 1973**

1980

**1981:** Second section of Atlantic Avenue is completed (Whitaker Mill Road to the Beltline).

**1986:** Bicentennial Boulevard Project is initiated. Beautification efforts completed in 1992.

**1986:** The Seaboard and Chessie railroads are merged to form CSX Transportation.

**1982:** Merger of Southern and Norfolk & Western railroads takes name of old Norfolk Southern railroad.

**September 1989:** Hurricane Hugo

1990

**1992:** With beautification efforts completed for Raleigh's Bicentennial, Downtown and North Boulevards are renamed Capital Boulevard.

**September 1996:** Hurricane Fran

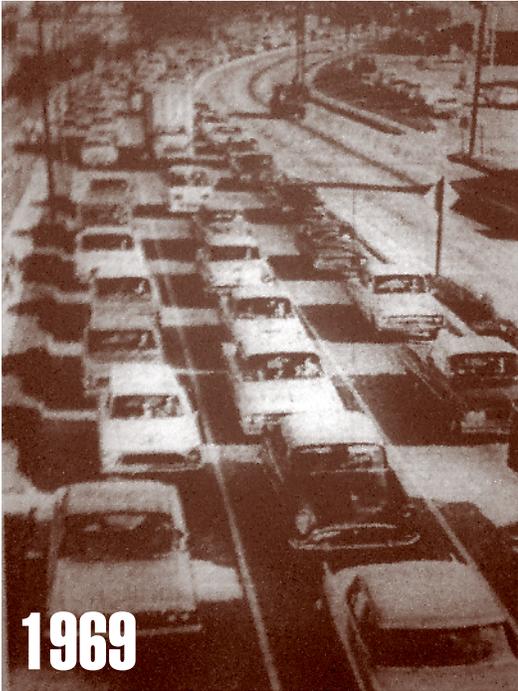
2000

**2008:** Carolina Coastal Railway begins operating NS railway north of Glenwood Yard.



Police officer directs traffic at opening of northern end of boulevard.

FROM N&O PHOTO



1969

Cars form long lines on Downtown Boulevard during peak traffic periods.

FROM N&O PHOTO

### **Speed Cut on Wreck Curve**

Bid to Halt Boulevard Accidents. Prior the installation of new 25 miles an hour speed signs, motorists driving along in a 45 mph zone were told only to "reduce speed."

*News & Observer 09-26-63*

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### **Planned Development Atlantic Avenue**

This facility utilizes portions of existing facilities with connectors on new location. It serves major industrial development along the Seaboard Air Line Railroad with connections to the North-South Expressway and to the Blount-Person one-way pair by way of Louisburg Road. The crossing of the Beltline Freeway was provided for in the structure over the railroad.

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### **Traffic Flow Smooth On Blocked Boulevard**

On an average, 48,000 vehicles cross the bridge going in and out of Raleigh. It is one of the most heavily traveled roads in the state.

*News & Observer 09-05-69*

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### **Boulevard Busiest Road**

The six-lane thoroughfare now carries 54,500 vehicles a day. The boulevard edged out last year's champion, the Winston-Salem Expressway.

*News & Observer 05-19-70*

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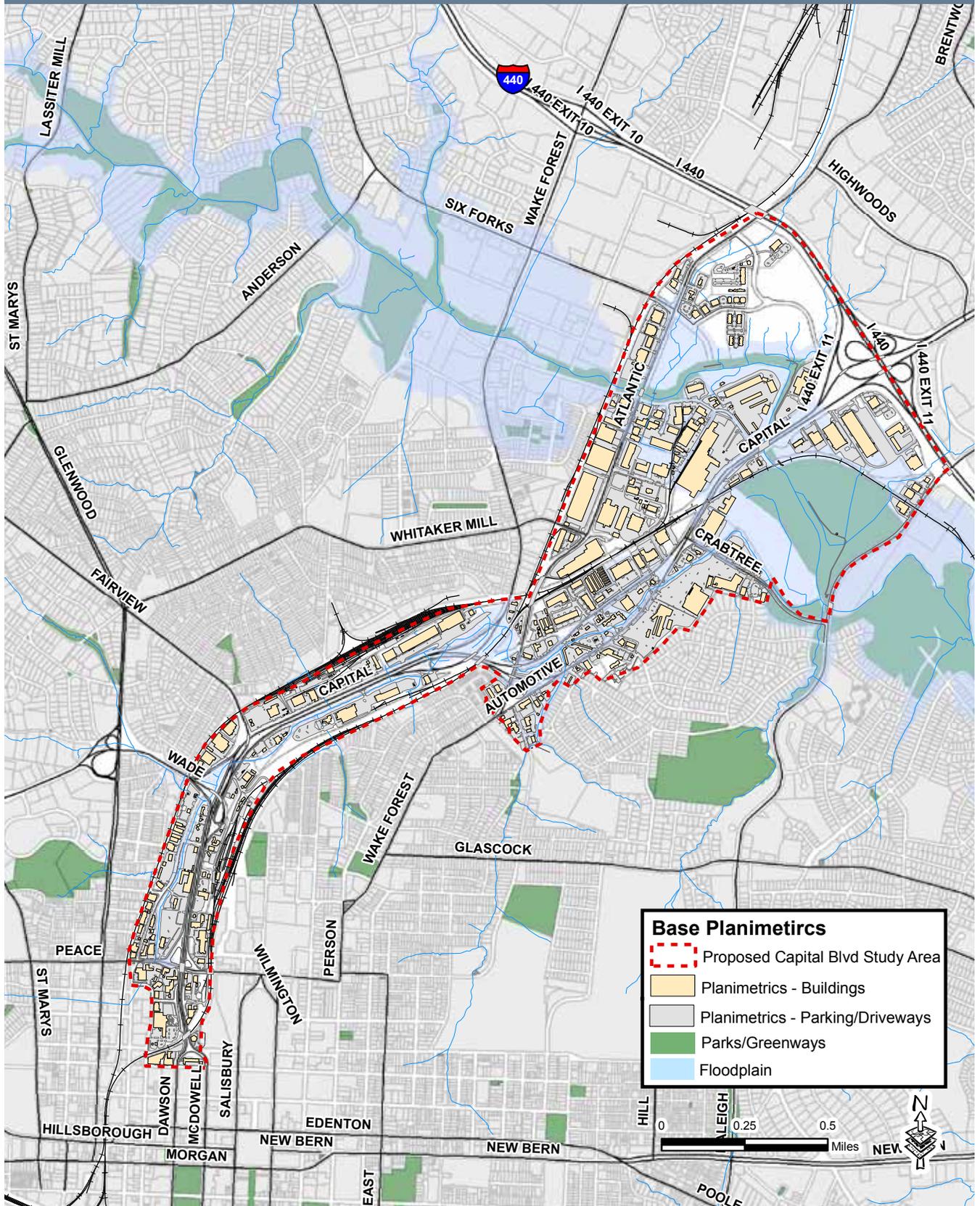
### **Council panel to review widening Wake Forest Road**

The widening of two-lane Wake Forest Road is part of a long-term project to complete Atlantic Avenue project and make it a major artery for traffic entering the City from the northeast.

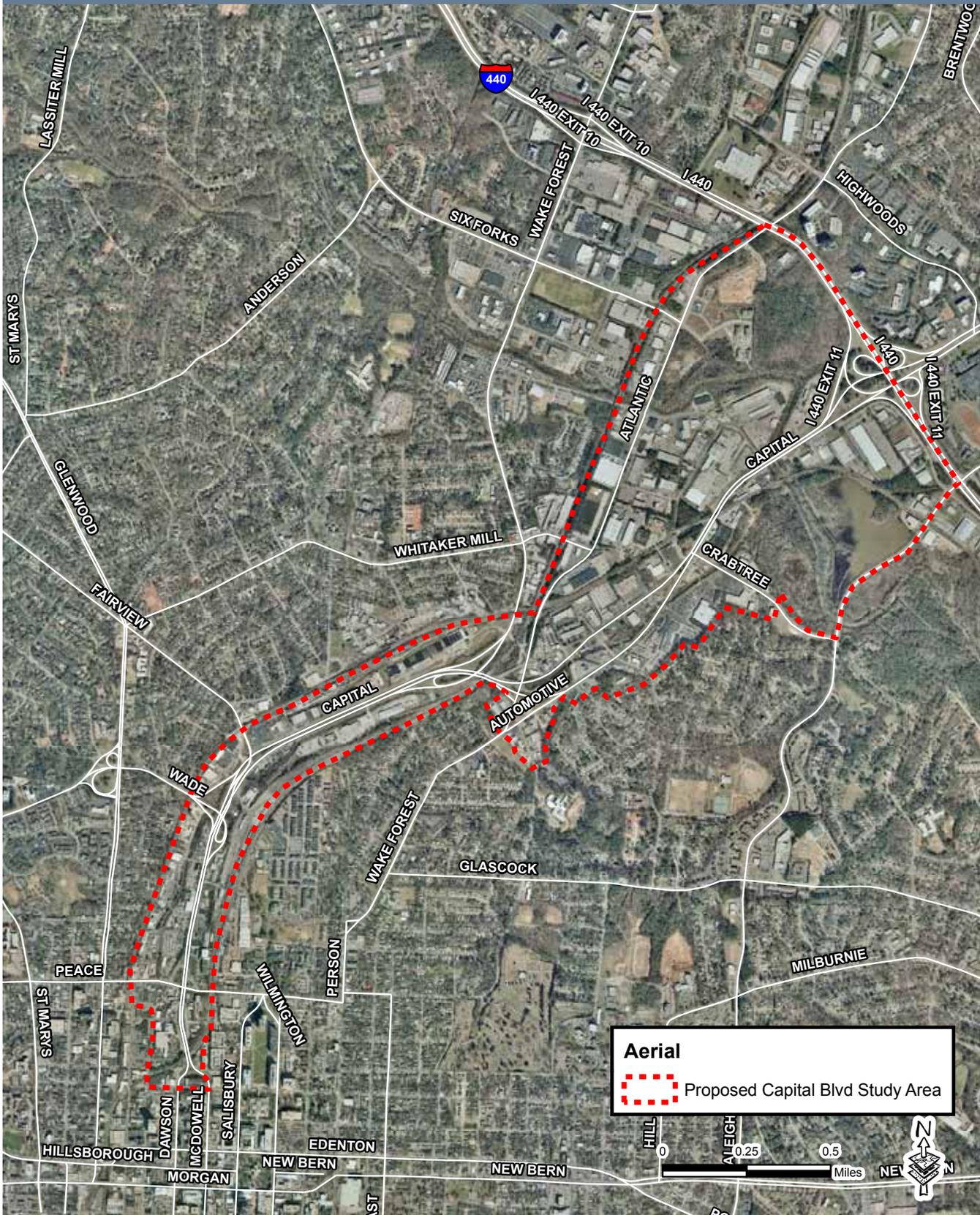
The City Council last month approved a \$179,000 contract with the firm Diaz Seckinger and Associates for a design study on constructing another segment of Atlantic Avenue, extending north from Downtown Boulevard to Whitaker Mill Road.

*News & Observer 11-07-81*

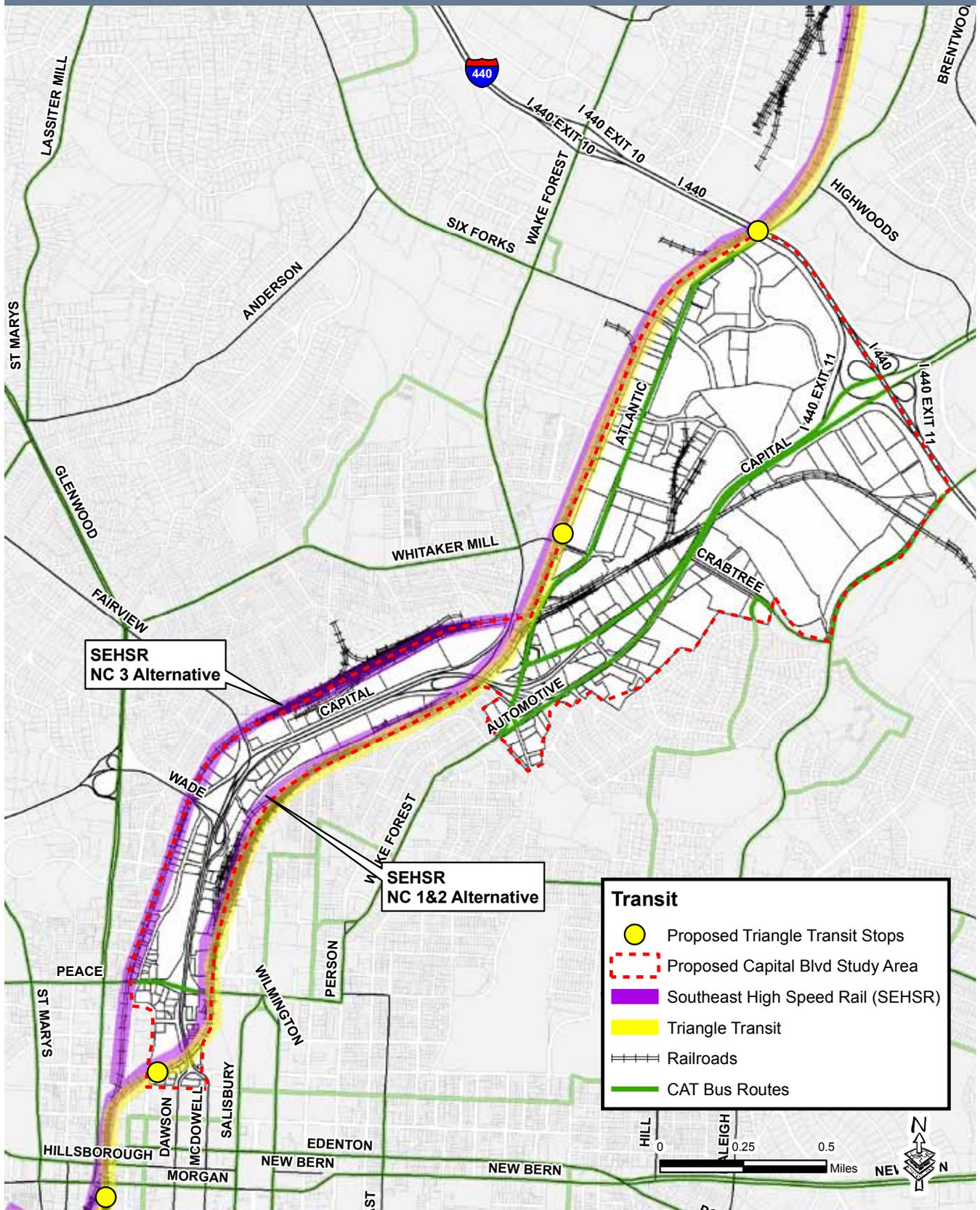
# BASE PLANIMETRICS



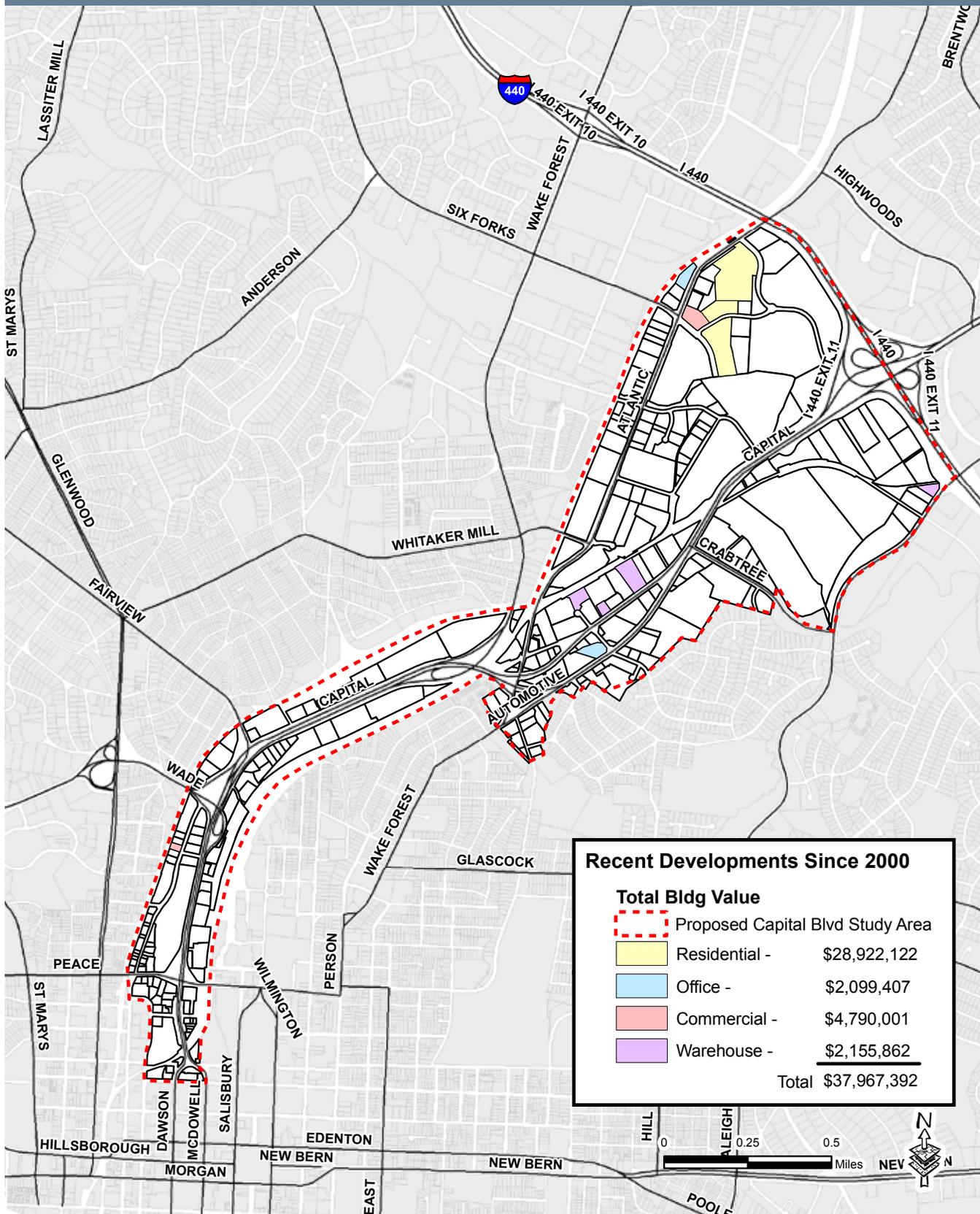
AERIAL



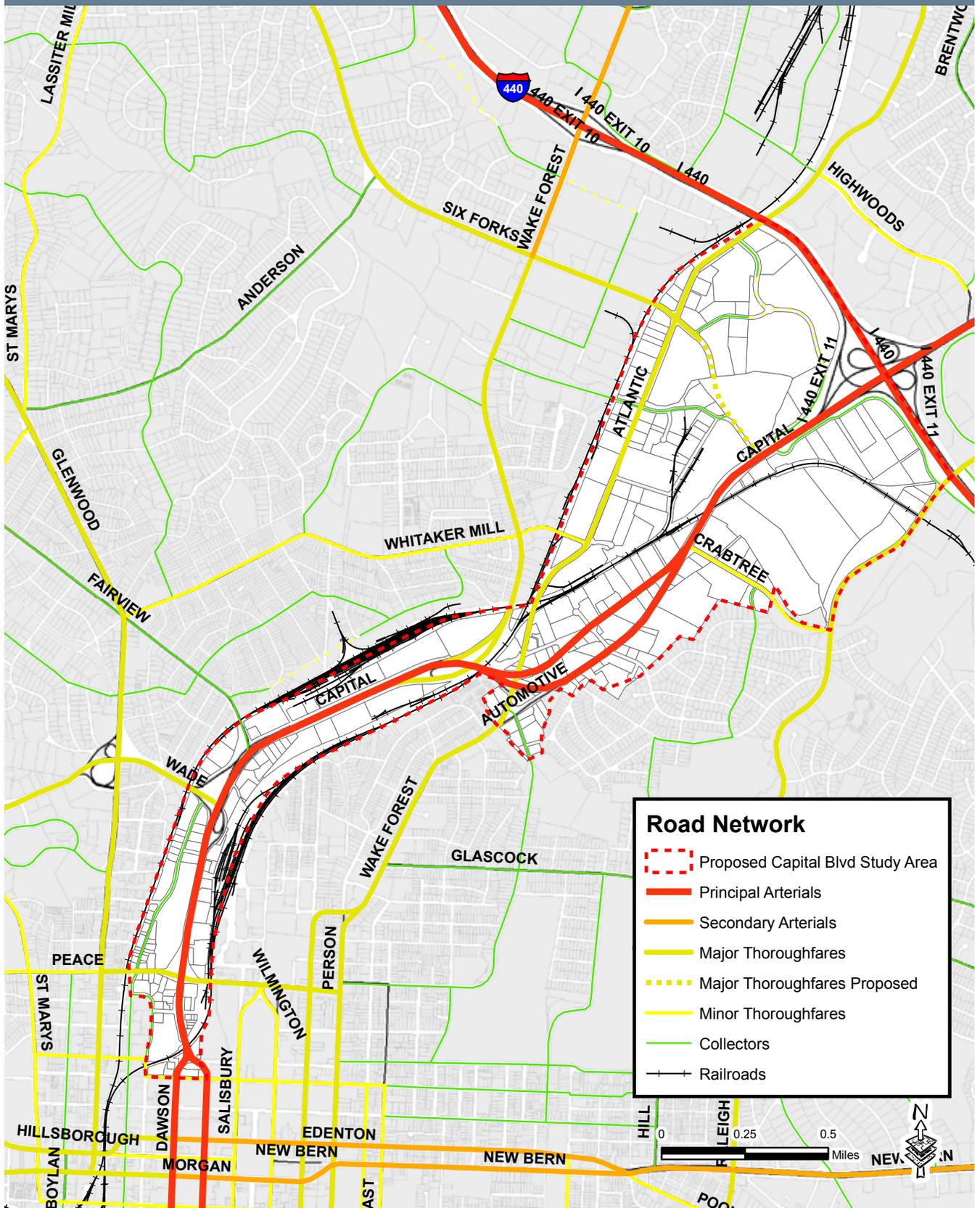
### TRANSIT: Existing and Proposed Bus and Rail Lines and Stops



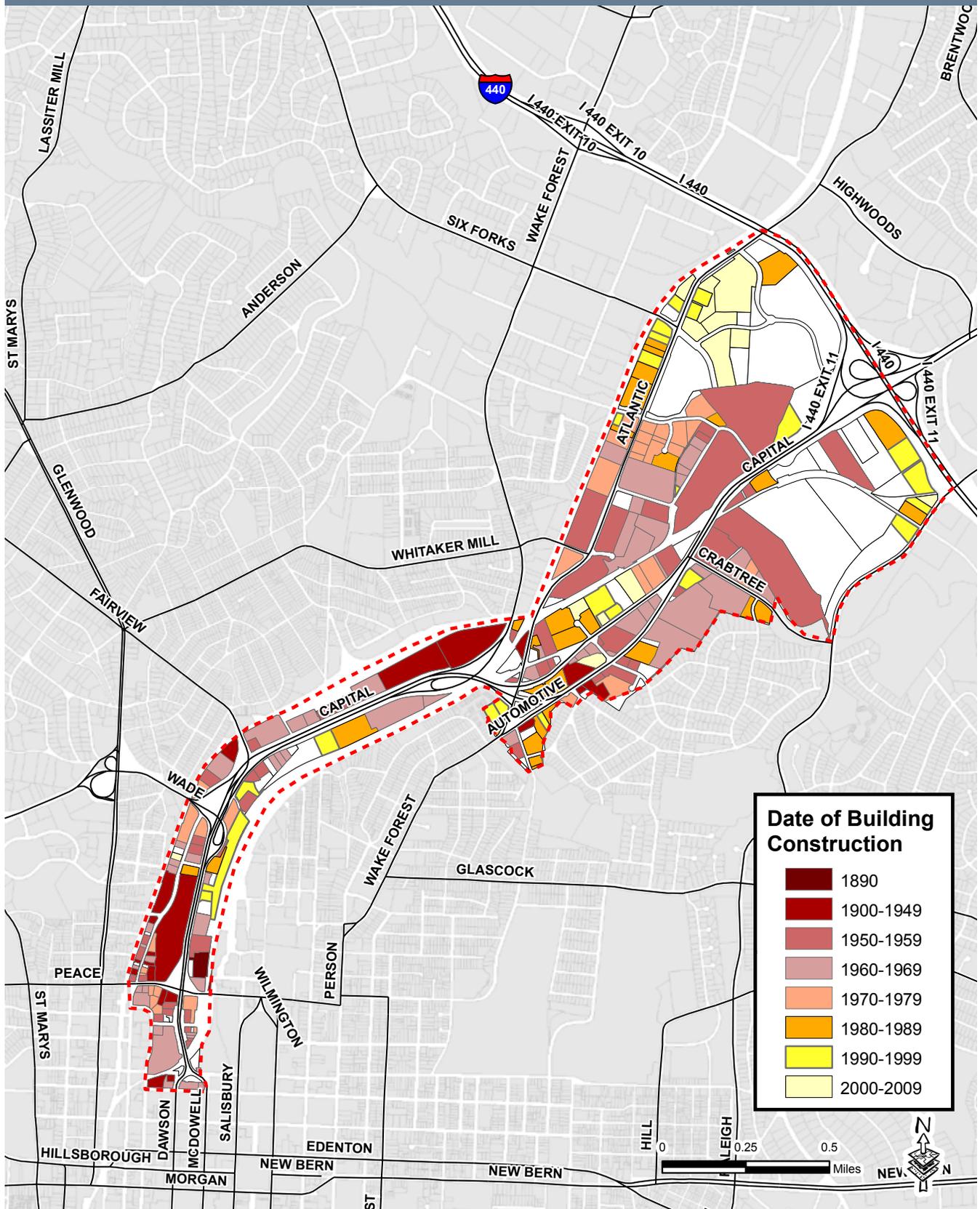
RECENT DEVELOPMENT



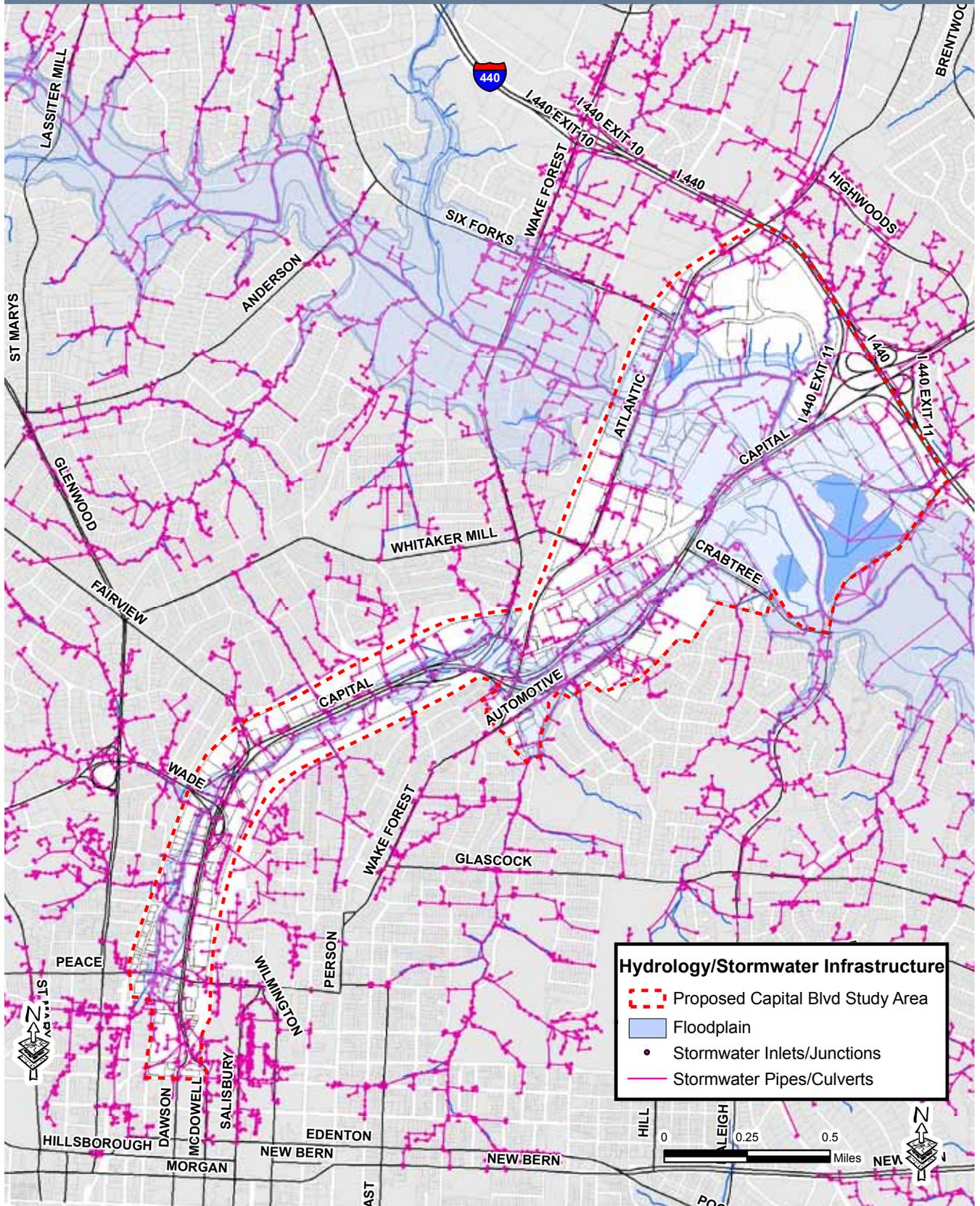
TRANSPORTATION



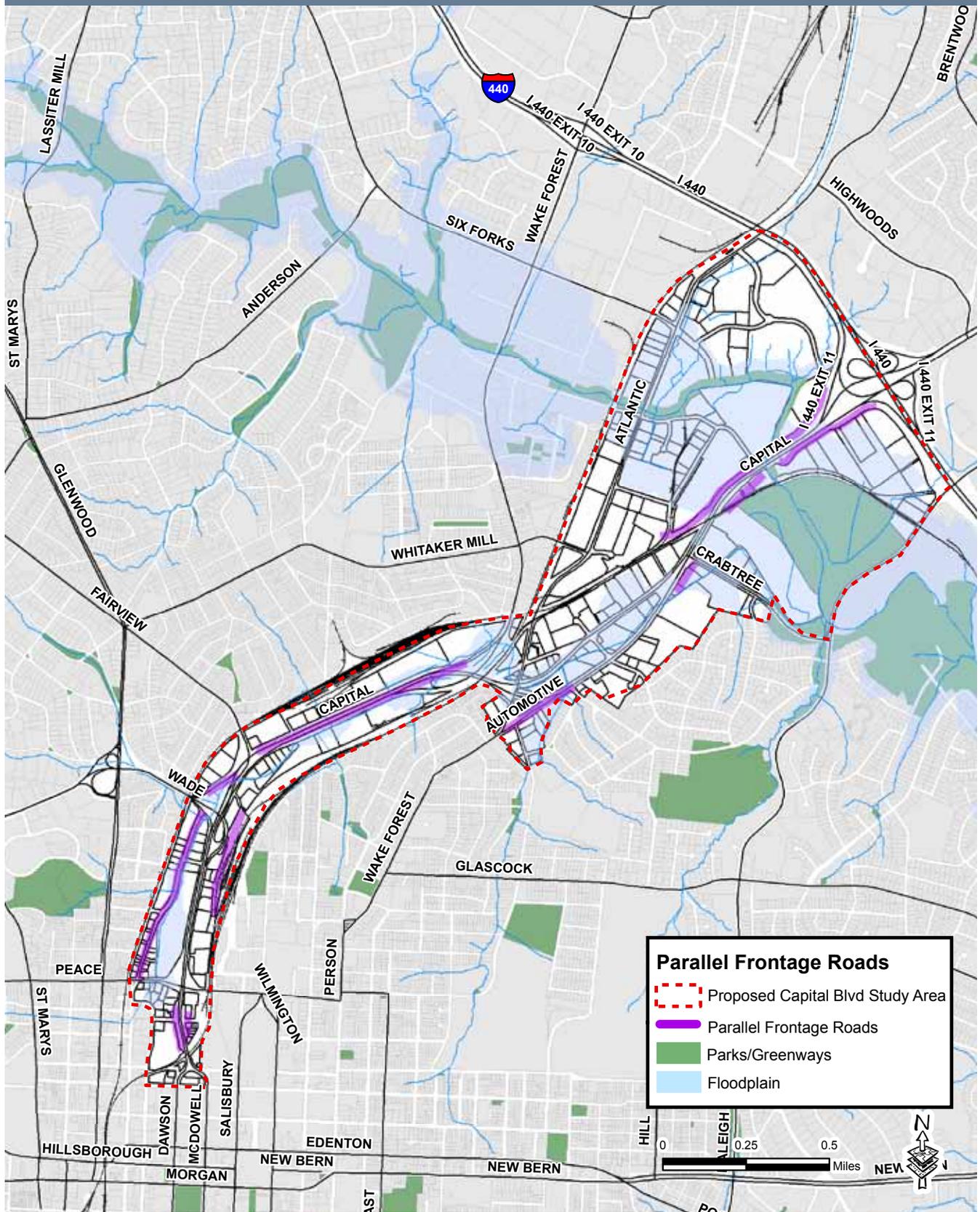
# DATES OF CONSTRUCTION



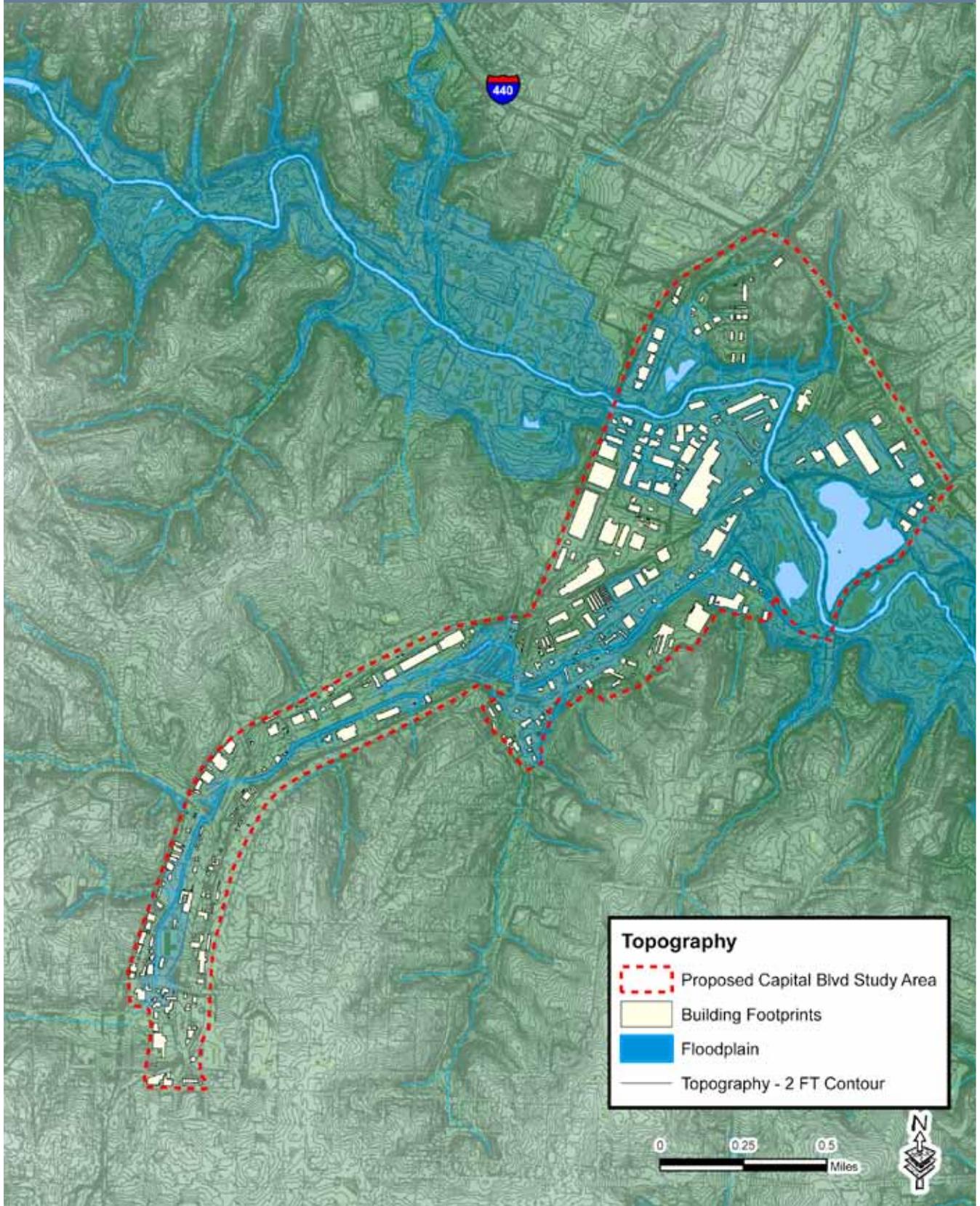
### HYDROLOGY: Water Bodies, Flood Way, Flood Plain, Stormwater Infrastructure



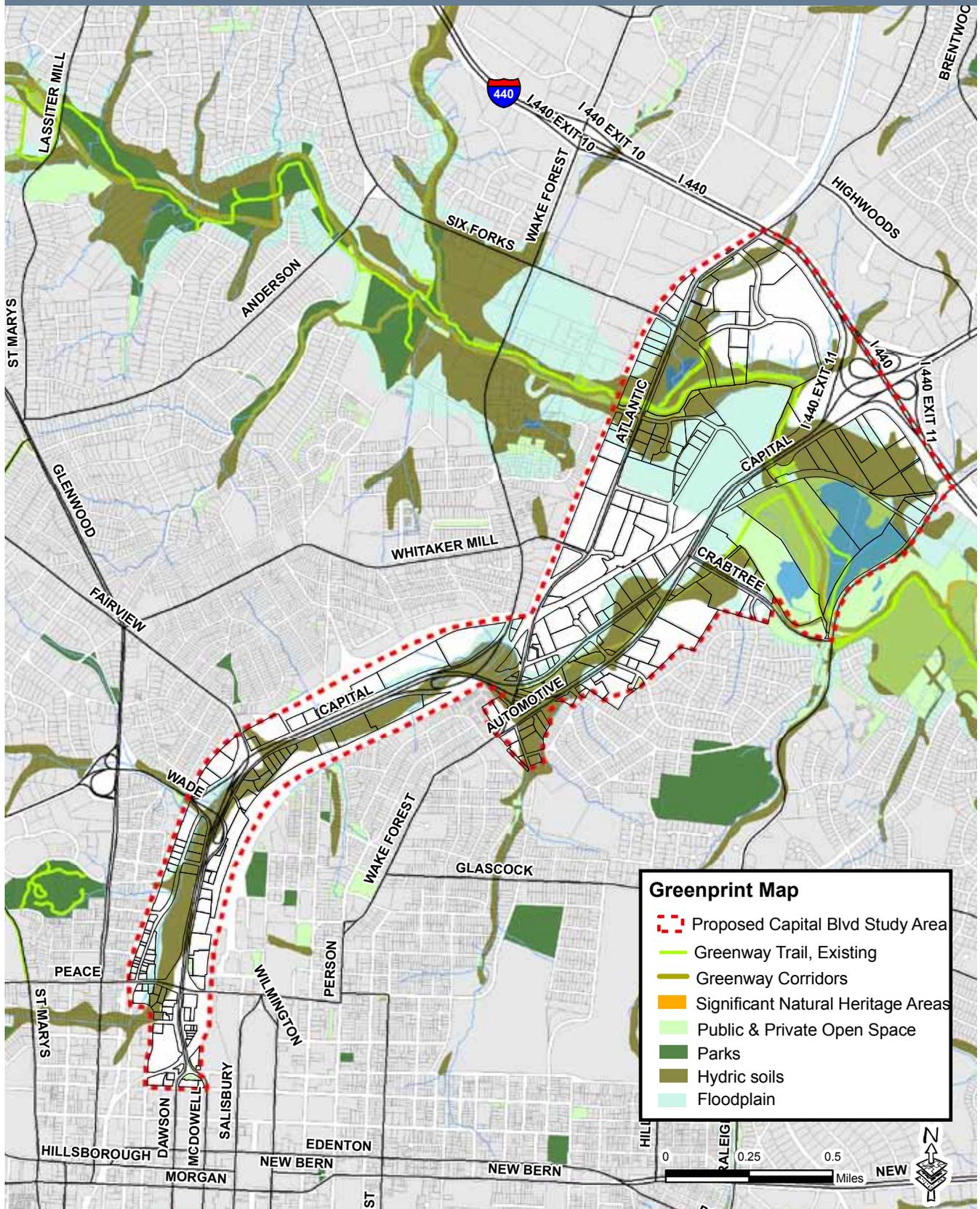
# PARALLEL FRONTAGE ROADS



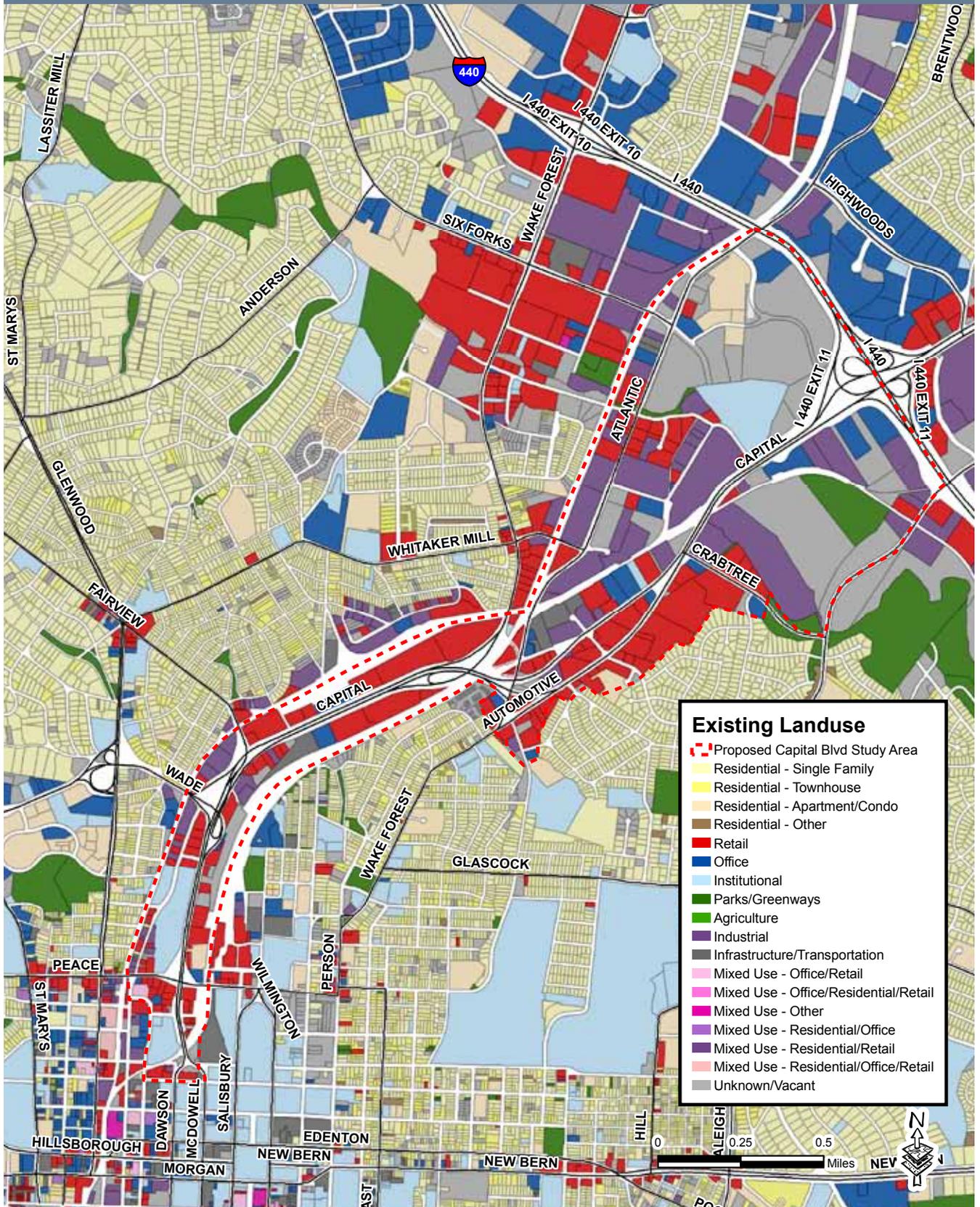
TOPOGRAPHY/ELEVATION



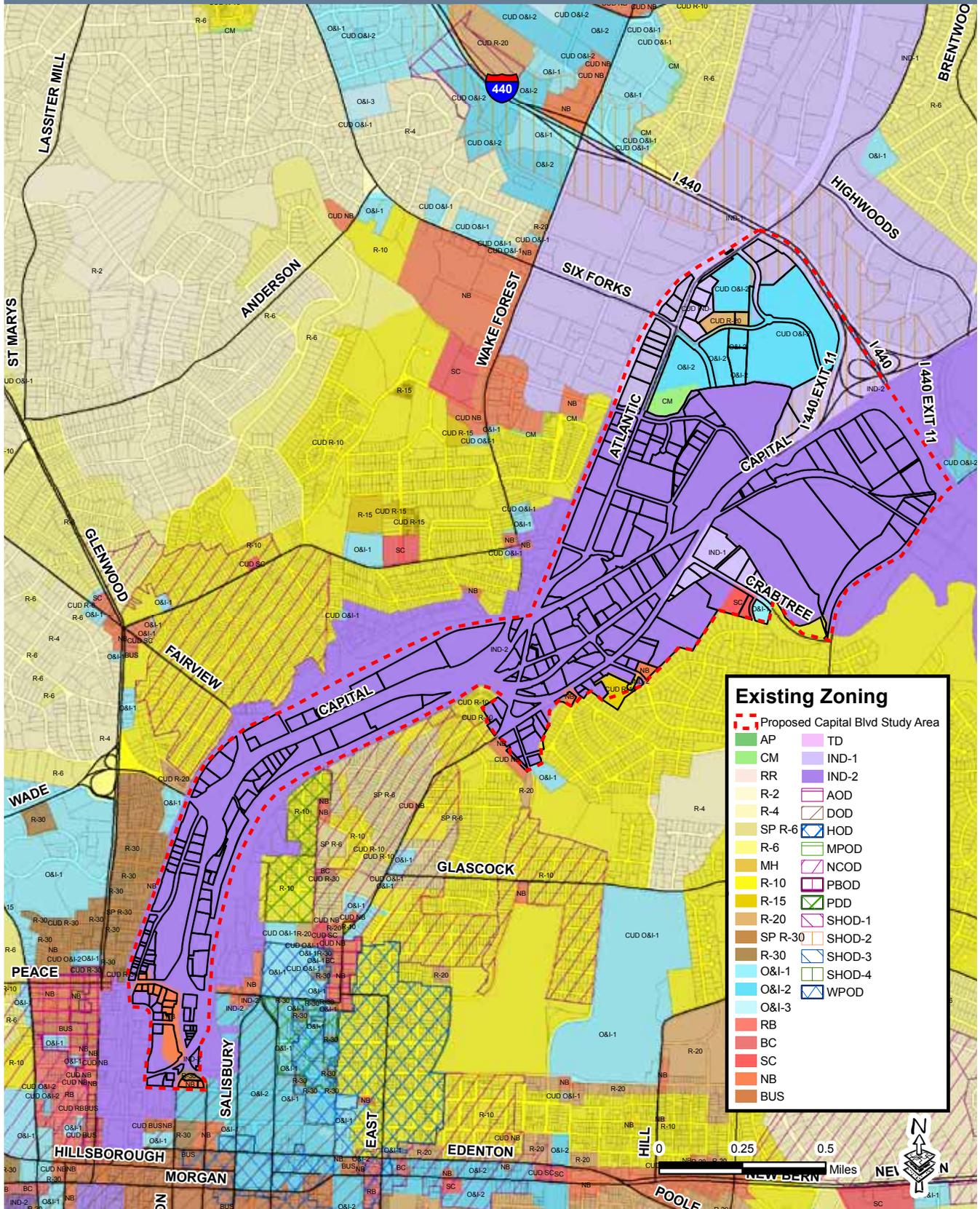
# GREENPRINT



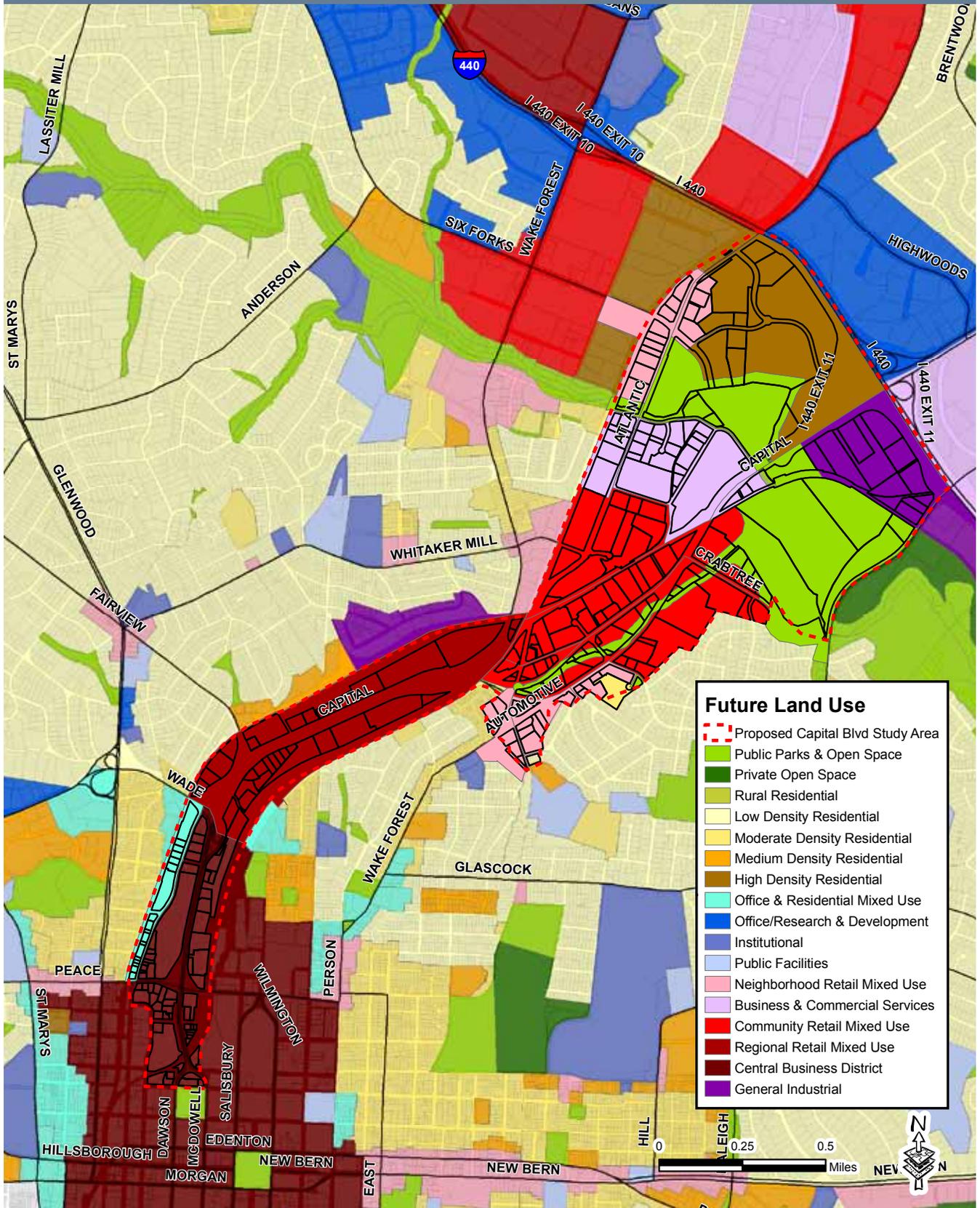
EXISTING LAND USE



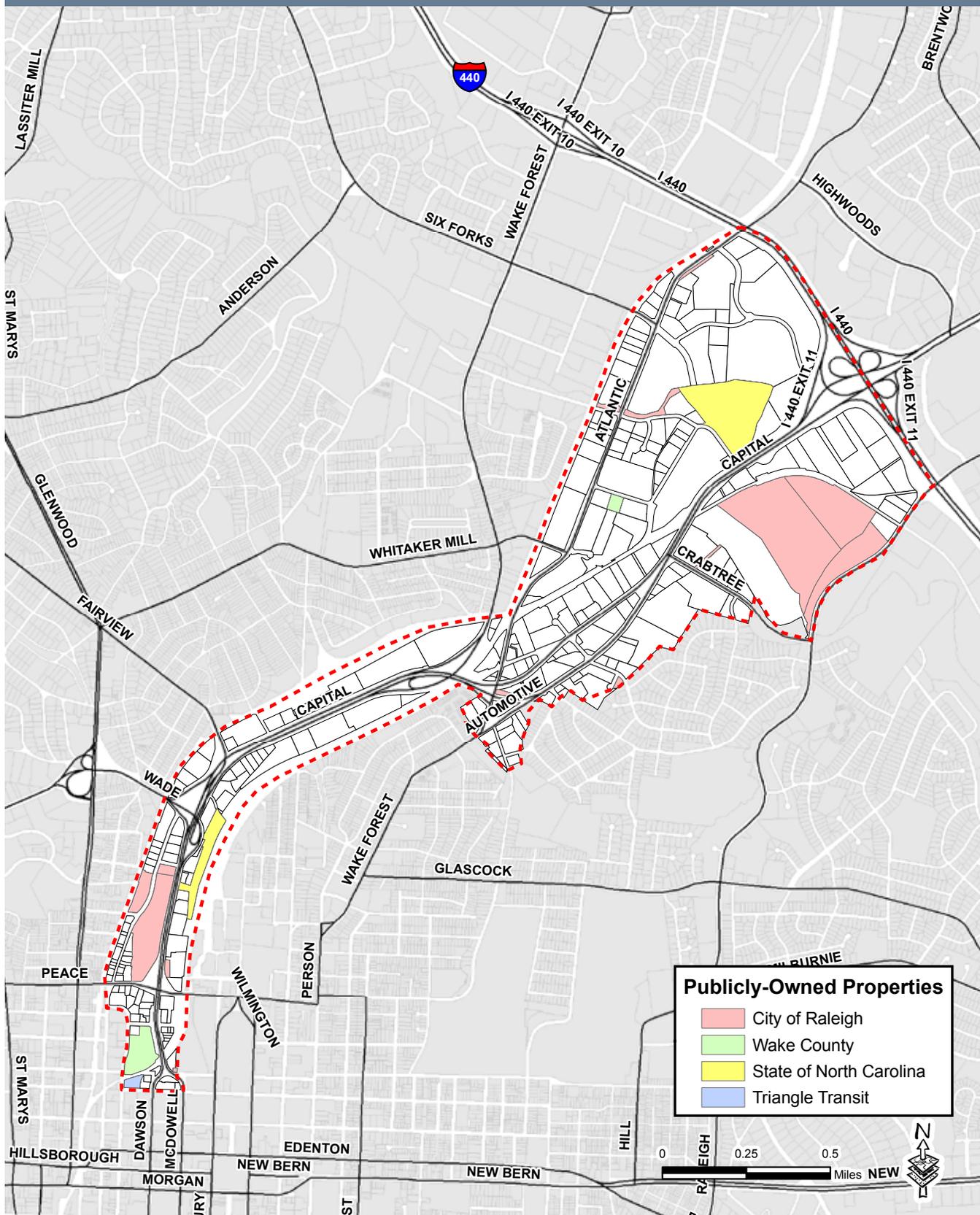
EXISTING ZONING



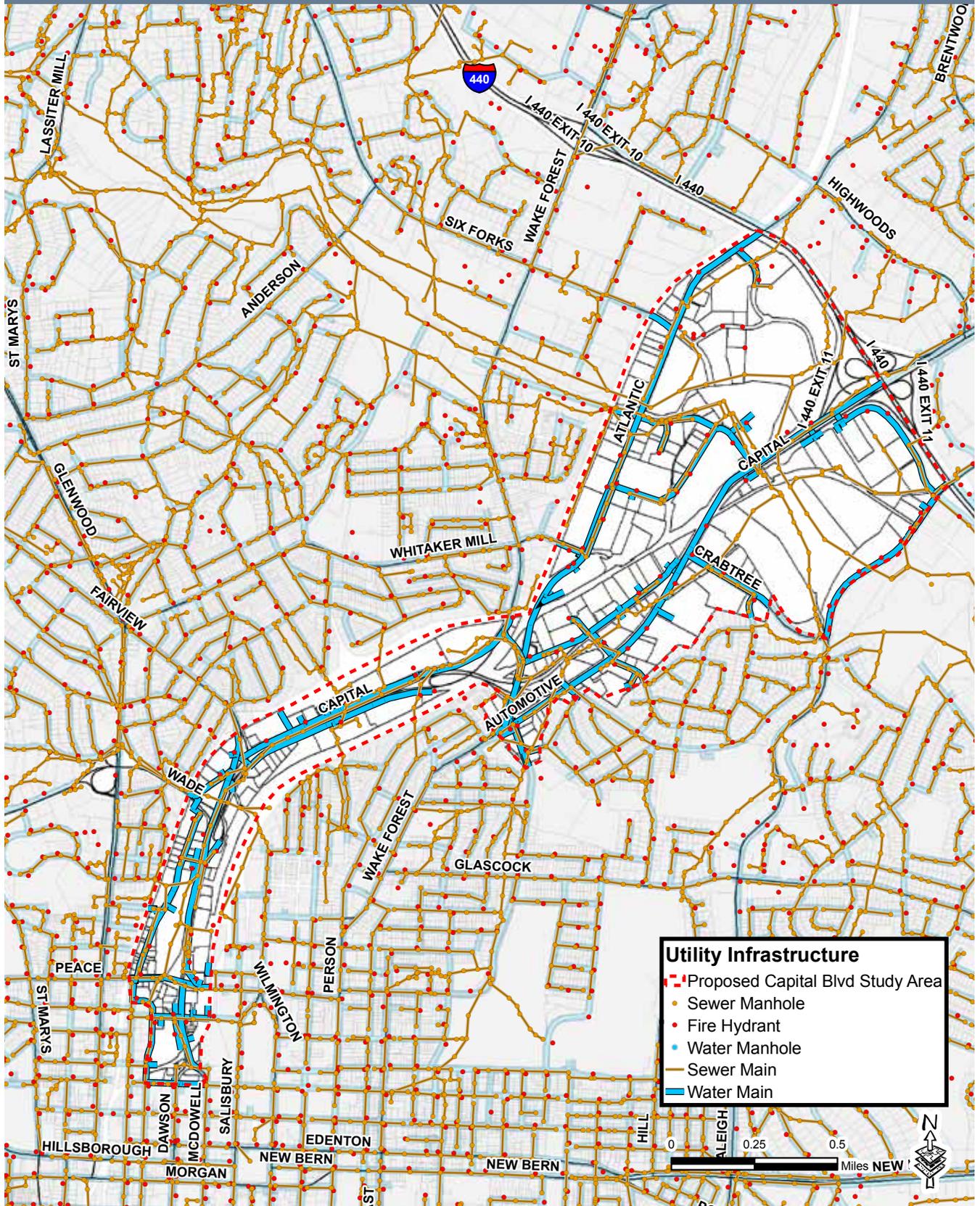
FUTURE LAND USE



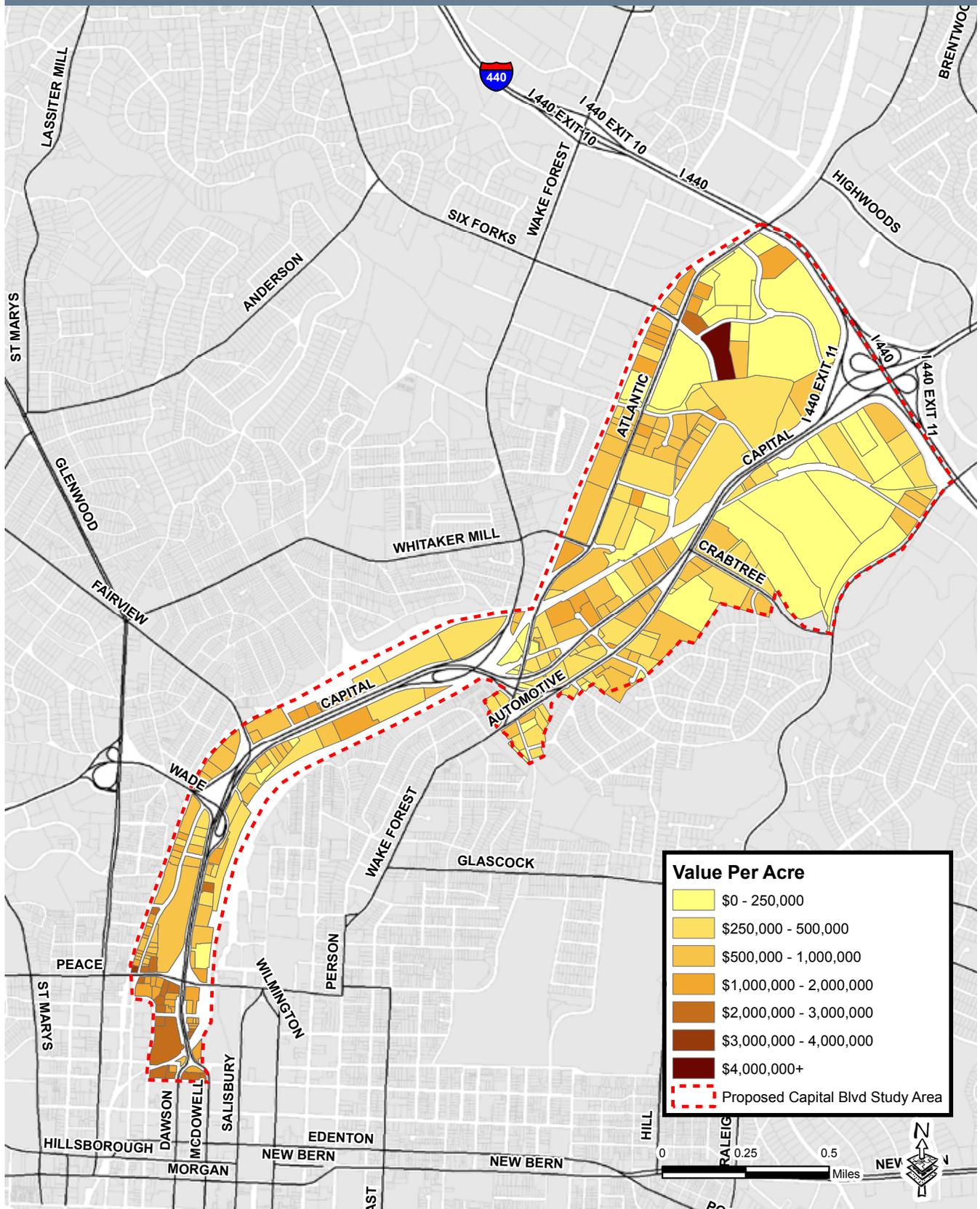
# PUBLICLY OWNED PROPERTY



# UTILITY INFRASTRUCTURE



ASSESSED PROPERTY VALUATION



AVERAGE DAILY TRAFFIC VOLUMES—Vehicles per day

